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ORIGINAL ARTICLES.

SOME FACTORS RELATING TO THE ETIOLOGY OF PROSTATIC ENLARGEMENT.¹

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EVER since clinical observers of urinary disorders have begun to appreciate the relation existing between prostatic lesions and some urinary difficulties, there has been a deeply-rooted idea that the most common affection, namely, prostatic enlargement is a condition of advancing years. A senile change similar to connective tissue deposits in other organs of the body which make their appearance with old age.

Guyon believed it to be a part of a general atheroma and said, in one of his articles upon the subject, that in his experience "*les prostatiques*" are always of advanced years. "You will not, for example, meet a man of forty years (*quarante ans*) with a true hypertrophy." Opinions of this kind, no doubt, have been inculcated largely by the fact that it is in old age that the symptoms of its effects are most marked, as well as by its appalling frequency at that period of life. When we think that, putting it roughly, one out of every three men has some degree of prostatic enlargement after reaching middle life, and that one out of five has enough to cause symptoms from which he must seek relief, the importance of the condition is manifest.

These figures are somewhat larger than those given by Sir Henry Thompson and Sir Reginald Harrison, but data of this kind are difficult to obtain and often misleading. For instance, Sir Henry Thompson believed the frequency to be one in seven or eight. Messer in one hundred examinations found 35 per cent. abnormally enlarged (1 in 3) Ditue, in one hundred and fifteen workhouse inmates, only 18 per cent. Socin believed the first more nearly correct, accounting for Ditue's low percentage by the class examined. My own observations at the almshouse bear out Socin's idea, but the percentage has been even smaller than Ditue's.

As the above are the authorities from which most statistics have been derived I have quoted them.

Thus, at the time in a man's career when he should do his best work, when he should reap the harvest of his early endeavors, and is looking forward to a comfortable old age, he is suddenly made aware that he is a victim of a disease which, creeping upon him insidiously,

saps his vitality, renders him a slave to his bladder, and makes pyogenic infection of his urinary tract with its dire results hang over him like a sword of Damocles, ever ready to fall upon some lapse of surgical cleanliness. Advanced thinkers, however, are beginning to cut loose from the antiquated idea that prostatic hypertrophy is only a senile condition, although many of the modern text-books still cling to it with bulldog tenacity, and are finding facts which show that prostatic enlargement is not a disease of old age, but that its foundation is often laid at the incipency of a man's sexuality.

It is with this idea in view that I wish to draw your attention to a few remarks bearing upon the subject.

While it is not the writer's intention to enter into a detailed discussion of the anatomy or physiology of the prostate, it may be well to mention a few of the more prominent features. We must appreciate that the prostate is not only a band of muscular fibers concentrically arranged around the bladder neck, but a highly-organized, secreting body partaking of as important a part in the sexual function as any of the various organs which comprise the sexual apparatus.

Three structures entering into its composition may be described, namely, the tubular glands, with their ducts; the smooth muscle forming the sphincter vesicæ internus, and the striped muscle forming the sphincter vesicæ externus. In addition through its walls run the ejaculatory ducts. The glandular elements do not reach full development before puberty and in some the muscular elements predominate throughout life, so that in one person the secreting function may predominate and in another the motor. This difference can be often felt by rectal touch and probably has a direct relation to the variety of hypertrophy which may develop later.

The prostate's part in the physiology of the sexual act is threefold, namely, (1) to close the bladder orifice at the time of ejaculation; (2) to supply a fluid which enters into the composition of the semen, as well as exuding into the urethra before ejaculation, neutralizing any urine which might be in the urethra and by its acidity destroying the activity of the spermatozoa, and (3) to aid in the expulsion of the semen at the climax of the sexual orgasm. All of these functions are to a large extent dependent upon an active congestion of the gland. The swelling of the prostate caused by its increased blood-supply completely closes the bladder opening. This same blood-

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supply produces an increased activity in its secretory function. The muscular contractility although centrally produced reflexly by irritation of the glans penis is also brought about by the reflex irritation of the nerve filaments in the prostate due to its distention. It has a dual purpose of aiding in the ejaculation and afterward, by expelling the blood from its dilated sinuses, of reducing its transient hyperemia. With this but meager allusion to the great physiological importance of this organ one can readily perceive how continued practices, perverting its normal function and disturbing its vascularity, will, as is evidenced in other organs of the body, the kidneys, liver, spleen, lungs, etc., eventually lead to interstitial changes causing pathological conditions.

We believe this to be one of the most potent predisposing factors in prostatic hypertrophy. If the sexual history of prostatic cases be carefully gone into, one will find that a surprising majority have abused their sexual apparatus to a greater or less extent and have kept up a constant hyperemia of their prostate for years, through total ignorance of the importance of hygiene in their sexual life. Modern society, with a false modesty, educates its youths in almost everything except giving them a true knowledge of their reproductive powers, and when a boy begins to appreciate that his penis is something more than a water pipe and inquires about it, he is too frequently told that "he must not talk about such things," "that he will learn in time." Not satisfied with this he goes to some friend, possibly only a few months his senior, and is instructed about that function which really is the chief end of man. To use the words of Krafft-Ebing, the function which "forms the most powerful factor in individual and social life. It is a mighty impulse for bringing into action our most effective energies, for acquiring property, for the foundation of a home, for rousing altruistic feelings for a person of the other sex, first, and, later, for one's children, and in a wider sense, for the whole human family."

Let us follow such a boy through his sexual life. He learns to masturbate from the instructions of this comrade and continues the habit for a number of years until he reaches what has been termed the "conscientious age." He now worries lest he has done himself injury and manfully tries to stop it. Suppose now he meets young women who will permit all liberties except the sexual act and the boy, who is now a young man, indulges himself, and unfortunately will take occasion to enjoy such women as often as possible. Such ungratified desire increases his sexual hyperemia and he seeks relief from a physician who advises him to go to women. This he does and, leaving out the question of venereal infection, his condition is aggravated because these embraces are not normal ones. He may or may not be stimulated by alcohol at these times, but he

usually tries to perform the act as many times as possible if not for his own gratification for that of his paramour. To go on further, this man marries and for various reasons, financial, social or otherwise, or because that by this time his hyperexcitability produces precipitate ejaculation and he is unable to awaken an orgasmic response in his wife and she, feeling that there is nothing in the sexual relation for her except childbearing, decides not to have children and they adopt withdrawal as a means to the end. This is often done, I am sorry to say, upon the advice of a physician. So the man lives in a state of sexual congestion for a number of years until various sexual neuroses develop which render him more or less impotent. It is for this condition that he usually first seeks medical relief. If you examine him by the rectum you will find a broad, flabby prostate, very tender, and in the region of the verum montanum, exquisitely so. The muscular fibers have lost their tone by the constant overdistention with blood and the glandular elements have become hypertrophied because of the extra amount of work forced upon them. Fluid can be expressed from the dilated acini and although the patient may not complain of urinary symptoms, even at this period questioning will frequently bring out the fact that there is an increased frequency of urination as well as hesitancy in starting the stream. Residual urine is uncommon at this stage, probably because the bladder muscle has not yet lost its tonicity and can overcome the existing degree of prostatic obstruction. While we do not believe that the foregoing history, which is not a hypothetical one, but that of a patient now under treatment, would cover every case of beginning prostatic enlargement, men's sexual lives being too varied to admit of such a possibility, we feel confident that abnormal sexual indulgences which tend to keep up a chronic hyperemia in the gland are more often a forerunner of subsequent enlargement than is senility, gout, rheumatism or atheroma, which are among the "chief causes" given in a popular work recently published.

It is not to be inferred that it is the few acts of masturbation practised by the irresponsible boy, the involuntary sexual stimulation which the healthy man may experience during the caresses of his affianced, or the irregular sexual debauches of a *roué*, which lead to a chronic hyperemia, any more than it is that infrequent alcoholic excesses lead to cirrhotic changes in the liver and kidneys. It is the persistency with which these men carry on these sexual aberrations over a long period of years which eventually produces lesions in the same way that the steady, quiet tippler becomes heir to a hob-nailed liver.

So much, then, for general considerations, but what Americans want is facts, so I wish to place before you some data which have been gleaned from three hundred cases of prostatic

enlargement in which a detailed account of the patients' sexual life has been recorded.

The first hundred have to deal with the condition known as prostatic congestion and the remaining two hundred with true hypertrophy. This distinction is, of course, to a large extent an arbitrary one, the conditions being so closely allied and so often present together that the difference is more of a clinical than of a pathological nature. It has been through the courtesy of Dr. L. Bolton Bangs that I have been able to use these histories in compiling these percentages, they being the records of patients who have been under his care during the past few years.

They represent men of the higher walks of life of almost every profession and it is an unfortunate commentary upon our own profession that so many of its number are upon the list, gynecologists and dentists being most frequently the victims. Some of the patients have been treated for sexual congestion, have been lost sight of, and years later have returned with symptoms of prostatic obstruction. Of the cases of sexual congestion, leaving out those complicating venereal diseases or acute inflammation, there are three abnormal sexual acts which have been indulged in excessively in over 85 per cent. of the patients, namely, masturbation, prolonged sexual excitement without gratification and *coitus interruptus*, also known as withdrawal or frauding. The number of years before their evil effects have become apparent seems to have a direct relation to the physical condition of the patient.

One of the patients was taught to masturbate at six years of age, continued it until he reached his twelfth year, when he began to have coitus. Until twenty-four he continued both when he developed symptoms of impotency. Rectal examination showed an exquisitely tender prostate almost twice its normal size.

The symptoms complained of in these patients have been sexual neuroses more often than urinary difficulties.

In the cases of hypertrophy, *coitus interruptus* has been present in 60 per cent. of the patients, masturbation and dallying in 25 per cent., and but 15 per cent. gave normal sexual histories.

Excessive sexual intercourse has been present to a large extent and especially among that class of patients known as *fraudeurs*. Their ability at first to perform coitus so frequently has been attributed to the fact that the quantity of semen lost is less when this form of coitus is indulged in. The true explanation probably is that they do not relieve their sexual congestion and that their nerve-centers are overstimulated by the peripheral irritation due to this congestion keeping them in a constant state of hanker. Eventually, however, they lose the sexual sense and, as has been previously stated, have their attention first drawn to their condition by failing virility. Many

other things produce prostatic hypertrophy which we have not enumerated, it being the writer's intention merely to show the frequency of the afore-mentioned causes in a large number of patients.

In the 15 per cent. of the cases in which no sexual aberration was present there were a number whose primary prostatic congestion was apparently due to a derangement of the portal circulation. They were men of sedentary habits who had suffered from functional or pathological disturbances of the liver.

We are not riding a hobby, as the Germans said of Bergeret, when he first wrote of the evils of frauding, neither are we so dogmatic as to think, with them, that no good can come out of France.

The age when a physician figured only as a healer of disease has departed. Now he instructs how to avoid it and as we have taught people how to live, so that the precautions against many diseases are ordinary household observances, so ought we to teach them the value of hygiene in their sexual relations.

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GASTRIC ULCER AND MUCO-MEMBRANOUS COLITIS AT THE PARIS CONGRESS.¹

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Two subjects in gastro-intestinal diseases were selected for special reports and discussion at the last International Medical Congress. These subjects, gastric ulcer and mucous colitis, have attracted considerable attention in the medical world of recent years. It seems worth the while, therefore, to invite further discussion by a brief review of some of the points that seem of special interest.

Gastric ulcer is not nearly so rare an affection as it used to be considered. Not only does it occur idiopathically with much more frequency than was thought, but it forms at times a serious complication in infectious diseases and in diseases of the circulation and metabolism. As the Fenwicks have stated in the preface of their recent book, *Ulcer of the Stomach and Duodenum*, gastric ulcer is not infrequently the unsuspected cause of death in certain infective complaints and in diseases of the heart and liver.

Despite the recent increased interest in gastric ulcer the etiology of the affection remains a subject of almost as much uncertainty as ever. A number of theories have been advanced to account for its origin and it is possible that most of them describe elements of etiology that act as adjuvant factors in the production of the affection. One thing is certain, ulcers having the typical characteristics

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of gastric ulcers occur only at those parts of the digestive tract in which there is free acid bathing the surface of the mucous membrane. These are the stomach, the duodenum and the gastric end of the esophagus. Duodenal ulcers resemble exactly those which occur in the stomach. Ulcerative lesions below the pancreatic duct, where the pancreatic secretion has neutralized the acidity of the gastric contents occur very rarely and are of a superficial character markedly different from the deep erosion which characterizes the gastric and duodenal ulcer. Erosive ulcers occur, however, at the gastric end of the esophagus where the regurgitation of the stomach contents causes the mucous membrane to be frequently bathed by free acid.

There is little doubt that gastric ulcers are due to self-digestion of the stomach wall. The predisposing factor that leads to this self-digestion is in dispute. Such distinguished authorities as Rokitsansky and Virchow attributed the digestion of the gastric mucous membrane to a disturbance of the circulation in the gastric mucosa and consequent lowering of the resistive vitality of the tissues. Virchow thought that the disturbance of circulation was due to embolism. He pointed out that the gastric ulcer has many points of analogy with infarct of the lungs. As is well known, however, gastric ulcers occur by preference in the pyloric end of the stomach. Embolism of the stomach arteries occurs practically always at the cardiac end. Experimentally no one has ever been able to produce embolism in the blood vessels of the pyloric region alone, yet solitary ulcers are usually situated here.

Two kinds of change in the blood of individuals predispose them to the occurrence of gastric ulcer. Anemia and the blood disturbance due to an infective condition somewhere in the body. It has been pointed out by Einhorn, I believe, that anemic patients are especially prone to suffer from gastric hyperacidity. Whether hyperacidity exists in infective conditions, or not, remains to be investigated. It would not be surprising, however, to find it. One of the simplest methods of inhibiting bacterial growth is to acidify the medium on which the micro-organisms are growing. It has been pointed out that one of Nature's protective mechanisms against infection is very probably an increase of the acid in the system, because of the effect this has upon micro-organismal growth. The occurrence of gastric ulcer only where free acid occurs and the fact that those who are especially predisposed to its occurrence frequently have gastric hyperacidity would seem to furnish the best clue to the origin of the affection. It is probable that certain irritative and traumatic influences are the immediate and localizing causes and that their absence permits many cases of gastric hyperacidity to run their course without the occurrence of gastric ulcer.

Further study of the affection to be fruitful must take account of one feature of the disease which has thus far been neglected. All gastric ulcers have been grouped under one head. This is rather the chronic form of the affection. There seems to be a distinct nosological entity, however, which may be called acute gastric ulcer. Symptoms of this affection occur almost always without warning. The most characteristic symptom is profuse bleeding. The affection occurs particularly in young women who are confined to the house, domestic servants, governesses, dressmakers and those in whom a sedentary, indoor occupation has induced a condition of anemia. Acute ulcer is noticed not infrequently in infectious diseases. Dieulafoy at the Paris Congress called attention to the frequency with which these ulcers are due to the pneumococcus. In a certain number of cases of death, the result of sudden profuse hemorrhage from the stomach, he has found minute ulcers of the stomach from which pure cultures of the pneumococcus could be obtained. These pneumococcus ulcerations are not necessarily connected with pneumonia nor with any affection of the lungs. As another French observer has pointed out, however, they may occur during pneumonia and then they make the prognosis of the case very unfavorable.

Another interesting form of gastric ulcer is that which occurs during the course of appendicitis. Dieulafoy particularly has called attention to this and the affection is spoken of by French writers as appendicitis with black vomit. It seems almost surprising, when we consider how much attention has been given to appendicitis in this country, that this symptom has not been noted more frequently. Dieulafoy has found that it occurs particularly in cases in which there exists a tendency to systemic infection and he attributes the origin of the ulcer to the change in the blood induced by the septic elements that have found their way into the circulation. We may recall that Von Jaksch called attention to the fact that acute gastric ulcer occurred with special frequency in puerperal women. It is probable, however, in these cases that it was not so much the puerperium that was the causative element in the case, as some one of the infective conditions to which puerperal women are so liable.

Now that the conditions in which gastric ulcer develops are more clearly defined, the prophylaxis of the affection seems worth considering. Gastric superacidity undoubtedly plays an important rôle. To this, the addition of some irritant seems necessary for the production of the ulcer. It is important therefore that patients who are anemic, or who are suffering from subseptic conditions should be given remedies to lessen the gastric acidity, as also the acidity of the blood to which the gastric secretion owes its abnormality. All irri-

tating substances should be carefully excluded from the diet and anemic patients should be warned against the danger of swallowing coarse food, or any sort of food that has not been thoroughly masticated. Needless to say they should be warned also of the danger of even slight trauma of the abdominal walls during the anemic condition.

Gastric Ulcer and Nervous Gastric Affections.—It was a favorite saying of Professor Oser of Vienna that nervous affections of the stomach can and do simulate every form of stomach affection known. This was illustrated very well by the fact that German and French clinicians reported a series of cases in which hemorrhages, sometimes quite severe, had taken place without any rupture of the mucous membrane of the stomach. In two cases at least operations had been performed with the expectation of finding a gastric ulcer. Ewald reported some cases in which he felt sure from the after-course of the disease that the hematemesis was due to nervous conditions and not to any actual erosive lesion of the gastric mucous membrane. In one case at least this opinion was confirmed by autopsy. Nervous gastric crises are now known to occur in many other diseases than locomotor ataxia. The possibility of their occurrence in any given case greatly adds to the difficulty of positively diagnosing ulcer of the stomach except when the course of the disease can be faithfully followed and carefully studied.

Treatment.—The most interesting thing about the discussion on gastric ulcer was the unanimity of physicians and surgeons in the expression of the opinion that surgical measures should be resorted to much more frequently than they have been. Dieulafoy insisted that as soon as hemorrhage becomes profuse enough to be alarming or recurs frequently the only safe therapeutic procedure is to open up the stomach, tie the bleeding vessel and excise the ulcer. Dr. Ewald of Berlin said that he finds himself in the position of having recourse more and more to the surgeon's aid in the treatment of gastric ulcer. If hemorrhage is alarming this is the safest method. Where ulcers prove very obstinate to treatment, however, two things must be borne in mind. First, that recovery by ordinary healing processes in these chronic cases almost inevitably results in future disturbance of stomach function because of contractile deformation of the stomach and interference with its motility. Second, old ulcers and their scars are especially liable to be the seat of gastric cancer. Either of these sequelæ may necessitate recurrence to the surgeon later in life when the patient's condition is not so favorable for operation and when the prospects of complete relief or ultimate recovery are very much obscured by the complications that have developed. The tendency of modern surgeons is, of course, very distinctly in the direction of

more frequent operations upon the stomach for benignant pathological conditions. The statistics of such operations and the relief afforded by them justify the extension of gastric surgery that they advocate.

A series of interesting communications were made to the Congress with regard to the use of olive oil in painful affections of the stomach. Careful clinical observers on both sides of the Rhine (and English medical men have the habit of saying that when observations made on one side of the Rhine are confirmed on the other there is surely something in them) claim that they have obtained marked relief in obscure painful conditions of the stomach by administration of large doses of olive oil. From 100 to 300 grams (3 to 10 ounces) of the oil are prescribed in the twenty-four hours. These large doses of oil seem to have been of special service in cases of gastric ulcer. Strauss of Berlin has seen them do good where all other means have failed and where even rectal feeding had proved unsuccessful. Matthieu of Paris said that he was skeptical as to the effect of the oil when he first tried it, being inclined to think it no more than an old popular remedy become a new fad, but experience proved it to be an extremely valuable therapeutic measure. He always has recourse to this method in obscure gastric discomfort. It was pointed out that the administration of morphine even hypodermically was contra-indicated in these cases because morphine is eliminated by the stomach and its presence increases the gastric hyperacidity already present. Atropine may be used, but there has been need of some simple sedative, such as is supplied by the oil.

Muco-Membranous Colitis.—There is no doubt that this interesting and little understood disease is on the increase in our time. The exact amount of increase is, however, not easy to determine. Statistics will have to be analyzed with great care if the actual increase in the number of patients with the disease is to be found. Mannaberg of Vienna said that in the last three years only twelve cases of the disease have been under observation in Nothnagel's clinic at the Vienna General Hospital. During this same period, observers in France have been seeing hundreds of cases of the disease. At Plombières, a noted watering place in France with a reputation for the cure of the disease, four hundred cases of mucous colitis have been under treatment within a very short time. Mannaberg insists that there are two conditions included under the name mucous colitis, which should be carefully differentiated. These are, first, mucous colic, a painful condition of the intestine followed by stools which contain mucus. The other, a recurring affection of the intestine in which patients' stools contain mucus and shreds of membrane and the general condition is affected. Mucous colic is a pathological incident. Mucous membranous colitis is a path-

ological condition. If mucous colitis were as common as it is reported by French observers there would surely have been many more cases observed in Professor Nothnagel's clinic, for during recent years the investigation of intestinal disease and especially of the stools have been subjects of special study in the clinic. Perhaps the difference in the statistics points to the essentially nervous origin of the disease. The high-strung nervous French suffer very often; the phlegmatic Austrians escape.

Boas of Berlin insisted that mucous colitis has become much more frequent in recent years. He attributes this increase of frequency to two causes. First, the struggle for life has become more intense in our day and the nervous conditions which are practically always the basis of muco-membranous colitis have as a consequence become much more frequent. The second cause, is the present, common abuse of laxatives. Most people consider themselves perfectly justified in treating constipation in their own way whenever it arises and various forms of irritative purgatives are employed in constantly increasing quantities for the purpose of arousing peristalsis. As the constipated habit grows more inveterate the amount of irritation needed to produce evacuations of the bowel must also be increased. In addition to this, the presence for long periods, of fermenting fecal material adds to the irritation of the colon. The consequence is that the chronic condition of nervous hyperexcitability and irritative congestion of the colonic mucous membrane leads to hypersecretion of mucus and to the deposition of pseudo-membrane.

Dr. Boas said that some of the difficulty with regard to constipation in our day came from the fact that fats did not enter as plentifully into the modern dietary as they should. The absence of fatty matter in the stools made them more irritating, allowed them to dry up more easily into scybalous masses and in general hindered the natural mechanism for the easy passage of feces through the colon.

The nervous element is evidently the most important factor in the etiology of the disease. A number of observers pointed out its special liability to occur in nervous women and the fact that it sometimes seems to replace symptoms in the genital sphere. One observer pointed out that this proneness of the disease to serve as an equivalent for symptoms in the genital tract was true where the disease attacked men also. Symptoms of prostatism are sometimes replaced by an acute attack of mucous colitis. On the other hand, when the disease occurs in young men it is nearly always in conjunction with sexual neurasthenia and has been known to occur as the result of worry in a nervous individual during the course of a gonorrhea with complications.

The pathological basis of the disease is not known exactly. Fortunately very few patients die from muco-membranous colitis itself. In most of the reported cases where autopsies have been secured no lesions were found in the intestinal tract. Dieulafoy called attention to the fact that if the basis of the disease were a true inflammatory colitis a spread of the inflammation to the appendix might be expected to occur in a certain percentage of the cases. He has never had a case of mucous colitis under treatment in which appendicitis occurred as a complication. On the other hand, he has carefully collated the records of 700 cases of appendicitis that have occurred under his own observation and in but one or two instances was there any history of mucous colitis having preceded the attack. Potain confirmed Dieulafoy's observation with regard to a complete absence of any connection between mucous colitis and appendicitis. If the appendix were liable to be affected in this condition at Plombières, where several hundred cases of mucous colitis are often under treatment, there would be need of a surgeon in constant attendance for consultation in appendical complications. This absence of infective power argues against the existence of any inflammatory condition as the basis of mucous colitis and seems to stamp it essentially as a nervous disease.

Dieulafoy said that patients suffering from mucous colitis who have any anxiety as to the possible occurrence of appendicitis can be given absolute reassurance of their freedom from the liability to appendical complications without any necessity for carrying their appendices in their vest pockets.

While constipation is the prevailing condition between attacks of mucous colitis and especially before an attack, specialists from Plombières declare that there is also a diarrhetic form of the disease. This occurs in about one-tenth of the cases. The symptom on which the diagnosis of the disease depends is the presence of glairy muco-membrane in the stools, usually preceded by constipation and accompanied by recurring attacks of pain. The constipation is occasionally absent and the pain also in a certain number of cases. In about eight per cent. of the cases intestinal lithiasis is noted, that is, concretions are found in the stools.

All are agreed that the treatment of mucous colitis must be directed much more to the general nervous condition than to the local symptoms. As soon as the neurotic symptoms begin to disappear the attacks of muco-membranous colitis grow rarer and finally cease entirely. With this idea of the etiology of the affection patients suffering from this condition are advised, country residence, work in the open air and freedom from the strife and anxieties of urban life.

STREPTOCOCCUS BRONCHITIS IN INFLUENZA.

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THE fact that the various forms of bronchitis cannot be classified according to the bacteria found in the expectoration must be admitted without further discussion. While such a classification is very tempting, clinical evidences do not justify any such attempt.

On the other hand, it is the object of this paper to show that streptococci under certain circumstances produce a clinical picture which seems to me to be more or less characteristic. As far as my own observation goes these circumstances consist either in symbiosis, with the influenza bacillus, or as a secondary infection with streptococci, the influenza bacillus being the primary infecting agent.

I am not prepared to state that these are the only conditions that might produce this clinical picture; for it is conceivable that some other symbiotic combination, or streptococcus infection secondary to some other primary infection besides that of the influenza bacillus, might be followed by the same result; but I had not seen this clinical picture before the first influenza epidemic came upon us, and I have since never seen it except in combination with influenza. The subject is of vast importance, not only on account of the frequent occurrence of the clinical picture, but also in relation to differentiation from tuberculosis of the lungs; not a few of the cases which form the basis of this paper having been sent to me on account of the fact that a diagnosis of phthisis had been made either positively or tentatively. All the cases were observed in private practice. I have not included any hospital cases, for the reason that they could not be kept under observation long enough for my purpose. Only such cases are included as I could follow up for at least one year after the attack had passed over. All the cases occurred during the epidemic of 1896, 1897, 1898, 1899 and 1900. None are included that occurred during the epidemic of 1901. In all there are fifty-four cases which were observed.

The reason for calling this condition streptococcus bronchitis is to be found in the fact that in all the cases this lower form of life predominated, and, in quite a number of cases, notably some of the worst, it was the only bacterium that was found in the expectoration. While it has been impossible to fulfil the requisites of Koch as to the pathogenic nature of the streptococci, the constancy with which they are found, and the relative uniformity of the clinical picture, seems to me to make it impossible to use any other term.

The frequency of the occurrence of streptococci in influenza has impressed itself upon a large number of observers, and before the discovery of Pfeiffer some went so far as to consider the streptococcus pyogenes as the cause of influenza.

The streptococcus was found in all the cases;

in twenty-three cases it was associated with staphylococci alone; in three cases streptococci, staphylococci and the diplococcus were found, in only one case streptococci and the influenza bacillus; in twenty-seven cases the streptococcus alone was found.

My only experience, as to the frequency of the influenza bacillus in influenza bronchitis does not correspond with that of Leichtenstern, who was able to find it in the sputum for weeks, but with that of Von Jaksch, who has shown that in the epidemics that have occurred within the last four or five years the influenza bacillus has disappeared after a comparatively short time and has been, as it were, replaced by the streptococcus. According to this, then, I cannot speak of a symbiotic process, but must consider the condition a secondary infection.

The age of the patients was as follows: Six between 10-20 years; 14 between 20-30 years; 16 between 30-40 years; 13 between 40-50 years; 4 between 50-60 years, and 1 between 60-70 years.

Under 10 years of age streptococcus infection of the bronchi with influenza is apt to take upon itself a different clinical picture than in older subjects, as has been shown elsewhere,¹ although it occasionally presents the same symptoms as in adults. Conversely, as will be shown hereafter, pseudopertussis is not rare in adults. That streptococcus bronchitis is rare after fifty years is of interest; but longer observation may show that this is due to the comparatively small number of cases observed and, therefore, too much importance must not be attached to this single observation.

There were 24 males and 30 females; inconclusive as to relative sex ratio on account of the small number of cases observed.

The symptoms were as follows: The onset of the disease always follows an attack of influenza, the primary attack being in the majority of cases of the respiratory type, in the minority, of the nervous or gastro-intestinal form. In other words, any form of influenza may be followed by this peculiar type of bronchitis. The symptoms of influenza disappear before the attack of bronchitis develops. This is the case in the large majority of cases; even when we find the respiratory type of influenza, the characteristic symptoms do not develop without a remission of from several days to a week or ten days. Thus, if a patient should have laryngo-tracheo-bronchitis from influenza this condition will have been very much ameliorated before the streptococcus bronchitis develops. Exceptions to this rule occasionally occur, but they are not common. It goes without saying that if the patient be in the period of convalescence from influenza the symptoms of that period will persist. The attack begins rather suddenly, so that in the normal form, i.e., in the most common form, it will be fully developed in from twenty-four to forty-eight hours. The dominant symptom is the cough; always spasmodic, sometimes

¹Cough in Influenza Simulating Whooping-cough, Archives of Pediatrics, XVII, 11, 1900.

simulating whooping-cough, occurring at night as well as in the day-time, and annoying the patient exceedingly. On account of the violence of the cough the patient complains of headache, pain in the lower region of the thorax and sometimes in the abdominal muscles. For the same reason vomiting occurs, and not infrequently the appearance of the face is the same as in whooping-cough; although this is not so common in adults as in children. The attack of coughing is usually followed by expectoration; the sputum varying from a mere serous through the various grades of mucous and purulent. The amount of coughing is disproportionate to the quantity of expectoration, so that in ten of the cases there was an admixture of blood; in six of these there was bloody mucus, in four unmixed pure blood—in two of the latter apparently independent of the effort of coughing.

Physical examination shows evidences of bilateral bronchitis in the medium-sized tubes, in the moist stage. At times there are evidences of bronchitis of the larger tubes, and in some cases these are always present; but the principal localization is in the tubes of middle size. The larynx is not implicated in the majority of cases; when the trachea can be seen it is not uncommon to find its mucous membrane injected. With these symptoms there is present an abnormality in body temperature. I have seen the temperature as low as 96° F. in the morning, and an evening temperature of from 99° to 100° F. or more (registered under the tongue or in the rectum), and making, therefore, an abnormally great diurnal range. The subnormal morning temperature is apt to be overlooked, because we are in the habit of shaking the register of the thermometer to the arrow and not below it. In children the temperature range is greater, showing an evening temperature of 102°-103° F., with subnormal morning temperatures not uncommon. Occasionally adults are found with this same range of temperature, except that the morning temperature is not so apt to go as low. The pulse may be abnormally slow, normal or rapid. If the pulse has been slow in the primary attack, which is a very common occurrence, it takes some time before it becomes normal. In a number of cases the pulse is rapid and, as opposed to the slow pulse, the ratio of pulse to temperature is retained; when the pulse is slow it remains so for the twenty-four hours, being accelerated only a few beats by increase in temperature. In those cases that were examined there was found no leucocytosis nor hypoleucocytosis, except in the severer forms when a moderate leucocytosis was noticed, not exceeding 14,000. The quantity of hemoglobin was always found to be consistent with the condition of general health of the patient. The length of the attack varies, as I believe depending upon the method of treatment employed; in two of the cases that had been treated for pulmonary tuberculosis the cough persisted for over three months; with proper treatment, begun at the proper time, the average duration commonly will not exceed two weeks.

Variations from this normal form are found in two directions; the rudimentary and the excessively developed forms. The rudimentary form is marked by incomplete development, in that the disease runs a shorter course; the temperature is not typical for a great length of time; the spasmodic cough is not thoroughly developed, and expectoration is limited.

The excessively developed form takes upon itself the clinical manifestations of an attack of septicemia, the cryptogenetic septicopyemia of German authors (Leube); a large number of those cases called influenza-typhoid belong to this class. Again, here there are two forms, the mild and the severe. Of the first class eight were observed. This form is marked by the characteristic onset of the normal form; but either in the beginning or later stages elevations of temperature are noted that are much higher than in the normal form (103°-105° F.); the course of the fever being either intermittent, with subnormal or normal temperature in the morning, or remittent, usually accompanied by a rapid pulse. Sweats are not uncommon, but seem to bear very little relation to the height of the temperature. Chilliness exists, but distinct chills are rare. With high fever the expectoration is reduced and the spasmodic nature of the cough may disappear, at least the number of violent coughing spells is reduced. Depending upon the degree of intensity of the attack, there may or may not be moderate leucocytosis.

In none of the cases did we find the plasmodium malariae, and in cases that were kept in bed the Widal reaction was always absent. The effect upon the general health is most marked. One of my patients, a physician, had his primary attack of influenza, of the respiratory form, in January, 1898; he recovered from this and continued his work. In April, 1898, he had a second attack which was accompanied and followed by moderate fever, occasional sweats and the characteristic cough. When he came under my treatment the beginning of June, he had lost, in all, forty pounds, he was extremely weak, emaciated and anemic, and all the symptoms still persisted as violently as they had in the beginning. He was sent to me with the diagnosis of phthisis pulmonalis. Examination revealed a weak right apex (slight dulness, diminished respiration, slight increase in vocal fremitus), a general bronchitis of the middle-sized tubes, profuse expectoration with streptococci and no tubercle bacilli. Since the middle of July, 1898, he has been perfectly well, has regained all his flesh, is in full practice, and has recovered completely from his tuberculo-phobia.

In the cases included in the epidemics referred to I have met with no other evidences of septicemia except those already mentioned. That this form is not uncommon is shown by the fact that out of 54 cases 8 suffered from it. The duration of the attack varies from weeks to months and in the latter case serious general disturbance may be set up.

Of the severe form there are two cases. The

first, a young man of twenty-three, who had a severe attack of influenza of the respiratory form accompanied by unusually high fever; after recovering from this the ordinary symptoms of streptococcus bronchitis appeared, but in ten days there developed a remittent fever whose evening maximum was 105° F. This continued for six days and then there developed a train of symptoms as follows: Irregular temperature with high maxima (106° - 107° F.); great debility; very rapid pulse (110-160); tachypnea (50-60 respirations per minute); profuse sweats; hemorrhages into the skin; amaurosis (due to retinal hemorrhages); albuminuria; slight enlargement of the spleen; diarrhea; delirium; and, finally, after three weeks, death. In the lungs there were noticed no evidences of consolidation, but those of a general bronchitis; in addition there was the fact that during the latter ten days of the illness fibrinous casts of the larger bronchial tubes were expectorated. Examination of the expectoration revealed almost pure cultures of streptococci, and the membranes were those of streptococcus croup. No autopsy.

The second case was that of a physician, forty-seven years of age, who had had his primary attack in November, 1897, followed by streptococcus bronchitis, and who came to me on January 3, 1898, in the following condition: General bronchitis, recent endocarditis (mitral insufficiency); tachypnea; diarrhea; irregular fever, no chills; albuminuria; pains in joints; copious sweats; great debility. Streptococci and staphylococci were found in the expectoration; leucocytosis, 18,000. On January 4, 1898, streptococcus serum was injected, followed by very little improvement, due probably to the fact that the patient had been sent home and his physician did not understand the dosage of the serum. On the 17th of January the normal dose was administered and was followed by a marked improvement. It was again repeated on the 22d of January, and the report came that the patient was practically well; no temperature, the cough gone and respiration normal. On February 3, 1898, I received word that the symptoms had returned, and that the patient was suffering severely from dyspnea. Two days afterward I went to see him, and found a recent pericarditis and pulmonary infarct, from which he died in two days. Again no autopsy.

These two cases, presenting as they do the clinical pictures of septicopyemia of bronchial origin, are the only ones I have seen in private practice. In hospital practice they are more common. They are representative of that which can be done by the streptococcus after influenza; but, under all circumstances, mild as well as severe forms must be looked upon as septicemia, or septicopyemia, the origin of the infection being found in the bronchial tubes. It may be proper to state that in the present epidemics we have had many secondary localizations of the streptococcus; in the intestinal canal, in the joints, in the kidneys, especially in connection with streptococcus bronchitis.

The complications that were observed were not many. Pneumonias are not so common with us as they are in other parts of the country, so that there were but three cases of pneumonia, in two of which the expectoration contained diplococci, streptococci and staphylococci; and in the third these bacteria plus the Friedländer pneumococci. In only one case could I satisfy myself that tuberculosis was either a complication or a sequela. This patient had an attack of streptococcus bronchitis in the winter of 1898, which was followed by the appearance of tubercle bacilli after two months. As a result of outdoor treatment she was restored to her normal condition—evidences of a slight infiltration in the left apex, and a compensated mitral insufficiency. In the winter of 1899 she had another attack of influenza, followed by streptococcus bronchitis, but no tuberculosis.

In patients whose cardiac condition was so evenly balanced that myocardial insufficiency could easily be produced, this developed, unless especial preventive measures were taken.

In the protracted cases, the differential diagnosis must lie between this secondary infection and that of tuberculosis of the lungs. It has been stated, I believe a little too rashly, that any patient who has for any great length of time subnormal temperature in the morning with slight increase in the evening, must be looked upon as suffering from phthisis pulmonalis. As a matter of fact, among all the cases observed—and it is for this reason that I have reserved only those cases which have been under observation for at least one year after the attack has run its course—I found only three cases that had tuberculosis, one already having been mentioned. In the other two cases tuberculosis developed, in the one, two years after the attack, and therefore, probably not to be looked upon as a sequela; and, in the other case, eighteen months after the primary attack.

The combination of streptococcus bronchitis with a weak apex of the lung is not an uncommon one and calls for great caution in differential diagnosis. On the other hand, it should be remembered that it is rare to find any human being with both apices alike; and, even if we were to call all those patients who had weak apices tuberculous, or as having latent tuberculosis, we would have to include a large number of human beings who never have shown or will show any other evidences of tuberculosis. Of the cases reported as becoming tuberculous none had hemoptysis nor bloody expectoration. On the other hand, those patients who had tuberculosis did not have hemoptysis.

The lines of differentiation must be drawn as to the general symptoms, the local symptoms, and, finally, the expectoration. While tuberculosis does develop after influenza, yet, if we find a combination of general symptoms with local symptoms, as I have attempted to describe them, there can be but very little difficulty in differentiation in the majority of instances. The objective signs on the part of the chest are those

of a general bronchitis, and not of a localization in one place or in another. If to these be added the fact that expectoration is profuse, and that repeated examinations fail to reveal tubercle bacilli, but always some other form of lower life, there ought not to be any hesitation in ascribing the proper cause to the symptoms.

It is possible that together with the signs on the part of the chest, as they have been described, there may be associated at the same time a tuberculosis; but under these circumstances the examination of the expectoration will always reveal the presence of the tubercle bacillus.

The treatment which I have pursued in these cases is as follows: In an attack of respiratory influenza I have made it a point to give quinine, my experience agreeing with that of some of the French observers that quinine has the peculiar property of preventing secondary infections. When streptococcus bronchitis develops I have used a remedy which I owe to my friend, Professor Glasgow of St. Louis, the benzoate of soda. This is to be given in large doses, one gram every two to four hours, always every two hours in the beginning. When the cough becomes too annoying, antipyrin, or codeine must be given; the codeine especially to prevent the dilatation that occurs so easily in hearts not perfectly strong. When the expectoration is too profuse, atropine or belladonna may be used to great advantage. In the severer forms, the unguentum Credé has been very serviceable; this combined with injections of antistreptococcic serum in the severest forms has in several instances given me good results. A change of climate seems to be of no benefit; indeed, some of the worst cases I have seen have come to me from health resorts.

Under all circumstances, we must not lose sight of the fact that we are dealing, first, with a local infection, and, secondly, with a general infection. The concept of a septicemia, acute or chronic, as the case may be, is the one that must guide us in the therapy to be employed.

FOURTH-OF-JULY TETANUS.¹

BY H. GIDEON WELLS, M.D.,
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IN the twenty days from June 25 to July 14, 1900, there were reported to the coroner of Cook County twenty-nine deaths due to tetanus. During a similar period in 1899 there were seventeen deaths from the same cause. Of the twenty-nine cases during the last epidemic all but two are to be attributed to wounds from explosives used in demonstrating that Independence Day had come, or was coming, for the Chicago youth distributes his abundant patriotism over several days or weeks.

The twenty-seven victims were all boys, ranging from ten to seventeen years in age, and with one exception had received injuries from the dis-

charge of blank cartridges. The exception was a wound from a toy cannon. As a general thing the wound was in the hand (24 of 27 cases, one each of the foot, eye and thigh), being received oftenest while the boy was trying to correct some error in the revolving or cocking mechanisms. The injuries were not due to bursting or any intrinsic fault of the weapons, but to the carelessness or inexperience of the users.

The period of incubation varied from five to nine days, and death occurred in from six to eleven days after the wound was received. None of the cases was of long duration, and in at least four it was under twenty-four hours. In other words the infection was of a virulent type, considering that as a rule the prognosis is much better when the period of incubation exceeds nine days, and recovery rare if shorter than this period. How many cases occurred in the city with a favorable outcome I do not know, but having heard of but a single case, despite diligent inquiry it is probable that they were few.

Why should tetanus be such a frequent result of Fourth-of-July wounds? It is of course impossible to tell how many boys were injured at this time, but these twenty-eight cases must represent a very large percentage; certainly a much greater proportion than results from the simple wounds received from other accidents. The fact that twenty-seven of the twenty-eight cases resulted from blank cartridges naturally suggests that tetanus bacilli might be present in the blank cartridges themselves, possibly from the use of dirty straw, etc., in the manufacture of the cardboard used for wadding. In seeking the cause of the epidemic of 1899 this source occurred to me, and I examined bacteriologically some two hundred blank cartridges, representing all the makes on the market. This research was reported in the *Philadelphia Medical Journal*, June 16, 1900. Despite all methods and modifications of technic tetanus bacilli could never be found in either wads or powder. Last year ten wads from each of the five makes in use were examined after the methods followed the preceding year, and the results were again negative. These bacteriological investigations, therefore, eliminate the blank cartridges themselves as the direct source of the infecting bacteria. It will be observed, as corroborating these results, that one of the fatal wounds was from a toy cannon, and also that during the twenty days in which the cases occurred there were two deaths from wounds not due to explosives. One was in a boy who fell from a tree and injured his hand; the other was similarly due to a wound of the hand with entrance of dirt and slivers of wood.

The remaining possible source of the tetanus bacilli, therefore, is the dirt which is on the hands, and which the blank cartridge wad carries in with it. Tetanus is endemic in Chicago, although not frequent; from one to four fatalities are usually reported to the coroner's office each month. These cases are oftenest due to the dreaded nail-

¹Read before the Chicago Medical Society.

wound of the foot, although frequently they are from lacerated wounds of the hands or other parts of the body. The bacilli in these cases are unquestionably introduced with the dirt carried in by the wounding object. In order to verify this theory as to the source, specimens of dirt were taken from the street in six different parts of Chicago, and examined. They were exposed to heat, 85° C. for thirty minutes, and then inoculated into guinea pigs and culture media. One of the pigs died after about sixty hours, with typical manifestations of tetanus, and the tetanus bacillus was obtained from cultures made from the site of the inoculation. The cultures made from the same specimen of dirt as caused the tetanus contained an organism identical in morphology and staining with the tetanus bacillus, but on account of the presence of other resistant spored organisms it could not be isolated.

Why should tetanus occur so much oftener after these wounds than after ordinary lacerations? My own ideas cannot be better expressed than by quoting from an editorial in *Medicine* of August, 1900, which, referring to my previous article on tetanus, says: "The blank cartridge in exploding almost invariably wounds the hands; portions of wadding are carried beneath the palmar fascia, and the difficulty of drainage in puncture wounds of the hands and feet is well understood. When the average patriot goes out to celebrate the 4th of July, he usually betakes himself to some vacant lot or the streets of his native town, and after a few hours of energetic celebration his hands are covered with several layers of dirt. An explosion of a blank cartridge carrying the wadding beneath the skin is almost certain to take the tetanus bacillus with it, as street dirt and stable manure are the special habitats of this bacillus. An absence of early cleansing of the wound which is perhaps trifling and does not reach a surgeon, gives ample time and opportunity for this anaërobic germ to develop, with early general infection of the entire system."

Everything about the blank cartridge wound favors multiplication of the tetanus bacilli. It is long and narrow so that air cannot reach them. Aerobic organisms are present to exhaust any oxygen that may have entered. Blood clots and blood-saturated tissues are always present and they also favor the bacilli, for Strick¹ has shown that one one-thousandth the ordinary fatal dose of tetanus bacilli will kill a rabbit if injected into a hematoma.

The root of the evil of course lies in our barbaric method of celebration. That this can be changed is hardly to be hoped, at least in the present day and generation, and legislation for that purpose is not the special province of the physician. But after the boy has mutilated himself then the matter is in the hands of the physician, and with our present knowledge of the etiology and treatment of this disease we have the right to enquire if there should be any cases of tetanus from these injuries. The writer of

the editorial quoted endeavors to leave a loophole for escape, by suggesting that the wounds are generally so trifling that they are not seen by a surgeon. He evidently considers that any surgeon would appreciate the gravity of the situation and take proper means to prevent the simple wound becoming the source of a fatal complication. Unfortunately this is not so. The boys who died in Chicago last summer were seen by physicians. In studying this epidemic a list of questions was sent to the parents of these children and answers received from the majority. Nearly all stated that the wound had been seen by a doctor shortly after it was received.

Leaving out the question of tetanus and considering alone the matter of sepsis, is any physician justified in leaving pasteboard wads shot into a grimy hand, at the bottom of a contused and lacerated puncture-wound? Yet this is the condition that was present in nearly every case of tetanus that followed these wounds. This applies by no means to Chicago alone, for the reports of cases and dispensary statistics from the country at large tell the same story of the finding of wads at the bottom of the wounds by the surgeon who was called in after tetanus had developed. Considering the infrequency with which tetanus follows wounds that are well cleaned and drained, it seems as if some of these fatalities, if not all, would have been prevented by ordinary surgical methods.

Occasionally, however, tetanus results from wounds that have received the best of care, developing sometimes after complete healing has occurred and all danger seems past. These cases are ordinarily not preventable, for tetanus is such a rare complication that few surgeons would consider it necessary to take any specific precautions against it as a routine practice. But knowing the frequency with which blank cartridge wounds cause tetanus, should not tetanus antitoxin be used as a prophylactic in all such cases? Tetanus antitoxin has not been used as a prophylactic in man to any extent, for the reason just given—that tetanus is not an expected complication. As a curative agent it has not given curative results, such as has diphtheria antitoxin, presumably for the reason that it is not administered until the patient is practically in the last agonies, it being understood that the trismus and spasms, which are usually the first indications, do not ordinarily occur until the fifth to the twelfth day of the disease. But as a prophylactic its action is positive, according to the veterinarians who use it extensively. They have many chances to observe its effects in stables where tetanus becomes endemic. In such a stable on the west side there had been for several years from six to eight deaths from tetanus annually. It was decided to give every horse with wounds about the feet a prophylactic dose of antitoxin. During the five years since this plan was adopted about three hundred horses were so treated, and none developed tetanus. One horse only with wounds was not injected during this time and it de-

¹Centr. f. Bakt., Bd. xxv. s. 206.

veloped tetanus, the only case occurring during the five years. Many similar series are reported by veterinarians. It is also interesting to note that as a curative agent antitoxin has given no better results in horses than in man, hence it is reasonable to suppose that it would be fully as successful as a prophylactic for man as for the horse. The usual prophylactic dose for a horse is ten cubic centimeters, so half that amount would probably be a great sufficiency for a man, and if we can compare it with diphtheria antitoxin this prophylactic use would be free from danger. As a matter of fact it has been used sufficiently as a prophylactic already to show that its use is quite safe.

To summarize the facts and impressions of this paper it may be stated that: Tetanus is endemic in Chicago, the specific organism being present in the dirt of the streets. Every Fourth of July an epidemic occurs, because these bacilli are carried deeply into wounds before wads from blank cartridges, and are then under favorable conditions for multiplication. Epidemics which always occur in other portions of the country, at the same time are presumably due to the same causes. Most of the cases occur in wounds that have been improperly cared for, the wads not having been removed or suitable drainage instituted. Therefore the first indication is to secure thorough surgical cleansing and drainage of the wound, preferably and almost necessarily under an anesthetic. As, however, tetanus sometimes occurs even in well-drained wounds, and considering the frequency with which it follows blank cartridge wounds, it seems to the writer that such cases should receive a prophylactic dose of, say, five cubic centimeters, of tetanus antitoxin, as soon as possible after the wound is first seen. It seems certain that if antitoxin prophylaxis were adopted there would be no further Fourth of July epidemics, and this end justifies the means.

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THE USE OF METHYLENE-BLUE INJECTIONS IN PLEURISY WITH EFFUSION.¹

BY CHARLES H. LEWIS, M.D.,
OF NEW YORK.

I HAVE been requested by the President to give a résumé of the method which I employ in treating some cases of pleurisy with effusion.

My early experiences with this method were incorporated in a paper on "The Treatment of Serous Effusions" read at the Hospital Graduates' Club, something over a year ago, and published in the *Medical Record*, December 30, 1899.

I regret that I have little especially new to add and but four new cases to append to the series published at that time. This is not, however, extraordinary when I recall that it took me over three years to gather and study the twenty cases reported in the article alluded to. I must also

¹ Read before the Section on Medicine, of the New York Academy of Medicine, Feb. 19, 1901.

confess to a discontinuation of the practice I had previously indulged in of borrowing from my colleague's wards every case of plural effusion that I could lay my hands on. To lessen the responsibility of letting loose a new therapeutic measure on a long-suffering, medical community, and to purge myself of the charge of rank empiricism, it may not be out of place on this occasion to suggest some of the considerations which led me to employ methylene blue in the treatment of serous effusions.

The rationale of the absorptions of pleural effusions has always possessed an especial interest to me, as it seems it must to every one who sees and follows the course of many of these cases. Why it is that the lymphatic sponge soaks up the fluid in the pleural sac in such an irregular—almost erratic—fashion, uninfluenced frequently by diminished intake and increased output of liquids, is, and always has been, quite incomprehensible to me. It is not an infrequent experience to observe fluid remaining unchanged in a pleural cavity for weeks and months, all of which time the patient is undergoing a rigorous and enervating course of cathartics, diuretics, and diaphoretics, and then note its abrupt recession and comparatively rapid disappearance. In other cases the serum is taken up by the lymphatics promptly and energetically under eliminative, salicylic, iodide, counter-irritative, or no special treatment. The pleural surfaces meet and are firmly and permanently glued together. The patient recovers with thickened and adherent pleural walls. No further encroachment of serum is to be apprehended, and with the exception of a possible subsequent slight contraction, the chest is to all intents and purposes normal. According to Dr. Frank Ferguson, autopsies on 80 per cent. of the cases dying of other than chest disease exhibit more or less general pleural adhesions. Samuel Gee in "Allbutt's System of Medicine" states that "recovery from pleurisy carries the assumption that adhesion has occurred." Osler, in his last book, remarks that "adhesions are probably an invariable result whether the pleurisy is primary or secondary." "Indeed," he adds, "it is rare to examine a body entirely free from them." And again, "they may exist without giving rise to the slightest disturbance in the function of the lungs."

In emptying a pleural cavity of fluid, two methods may be employed. First, aspiration, and, second, absorption through the lymphatic channels. So far as rapidity is concerned, aspiration, as recommended by Bowditch forty years ago, furnishes an ideal method. With modern asepsis and average care the operation is entirely free from danger. The objection is the often rapid re-appearance of the fluid, and the consequent necessity of a frequent repetition of the operation. On the other hand, in my experience, spontaneous absorption by the lymphatic stream, when effective, leads to permanent results.

The therapeutic resources ordinarily recom-

mended for facilitating absorption are uncertain in their action, and debilitating in their effects. Diuretics and strong counterirritants have had their day; Osler "damns with faint praise" weak counterirritants by saying "in some cases they appear useful." Hydragogue cathartics drain fluid from the vessels, but carry no assurance that the latter will recoup themselves from the reservoir in the pleura; diaphoretics possess all the disadvantages of hydragogue cathartics with none of their advantages; iodides and salicylates serve as forlorn hopes; antiphlogistics are antiquated and unscientific; Nothnagel pronounces "diuretics, cathartics and diaphoretics not only useless but harmful."

In studying the course of pleural effusions it occurred to me that if we could introduce some substance into the pleural cavity which would secure a more or less general deposit of fibrin on the pleural surfaces, and then aspirate, adhesion of the walls of the sac would result in sufficient quantity to prevent a return of the effusion; if the substance employed were antiseptic—since all pleural inflammatory effusions are pretty generally conceded to be due to microorganisms—an additional argument for its use could be adduced. Then, again, it might stimulate the absorbents.

Such were the considerations which induced me some four years ago to experiment with iodine, potassium permanganate, and the aniline dyes, fuchsin and methylene blue. After many observations, which it is unnecessary to detail here, but which are described at some length in the article already alluded to, I selected the blue as being easily the most likely to secure the contemplated results. Methylene blue is antiseptic, anodyne, has diuretic properties, is easily detected in the urine, and imparts a color not found in any bodily secretion, physiological or pathological. Delafield and Prudden have demonstrated that pleural adhesions can be evolved by irritant injection into the pleural sac after the preliminary stages of congestion and fibrinous deposit. They have also established the fact that the character of the exudation varies directly with the strength of the irritant. In order to safely throw a feebly irritating solution into a serous effusion so that the former may come in contact with the entire surface which the serum bathes, certain conditions must be fulfilled: (1) The irritating material must form an easy and permanent solution in the vehicle employed and in the serum; (2) the reaction and specific gravity of both fluids must correspond as closely as possible; (3) the material injected must be antiseptic or easily rendered aseptic, and (4) the volume of the fluid in the sac must remain unchanged.

After a not altogether satisfactory test of a saline solution approximating to the specific gravity of the serum as a vehicle to carry in the methylene blue, the idea occurred to me, to use the serum itself as a solvent, and, after making

a solution of it and the blue, to return both into the cavity. By such a procedure every essential would be fulfilled. As I had already determined, serum readily dissolves methylene blue in about 1 to 50 parts. The reaction and specific gravity would obviously agree, being a part of the whole. If no infection occurred during the trip its condition as to sterility would be as good as before—which is not always the best—and, finally, the amount borrowed would be paid in full so that no change in volume would result. It was expected that the respiratory movements and the operation of injection would produce sufficient agitation in the chest cavity to make a uniform mixture of the two serums. This expectation was fully realized as subsequent hypodermic taps at different points over the affected chest gave a fluid of uniform color and appearance. This easy and uniform miscibility of a solution of methylene blue and serum has been utilized by Niclot in estimating the total amount of a pleural effusion by the color of the sample withdrawn after injection of the dye. In *La Semaine Médicale* of November 28, 1900, he cites three cases in which the amount of fluid was accurately determined by such colorimetric observations.

The method which I formerly employed for withdrawing the fluid, making the solution, and re-injecting into the serous cavity, is practised by means of the large aspirating-syringe with a needle of medium caliber and fitted with asbestos piston and washers. A rubber tube is attached to the outflow tube of the syringe and extends into a glass graduate of a capacity of 100 c.c. or more, which holds the methylene blue. A glass rod for mixing the blue and serum is inserted into the vessel alongside the rubber tube and the entrance is then plugged with sterilized cotton. The whole outfit before use is easily sterilized by heat. If the sterilization is thorough, infection of the serum on the round trip from sac to vessel and return is impossible. Ordinary care renders the needle clean. The methylene blue being put into the graduate before sterilization is itself sterilized. It is, however, antiseptic, and I have never been able to get any growth from it in culture media even when coming from sources which would contaminate non-antiseptic materials. I have recently varied this method by applying the principle of the Potain aspirator, carrying the tube which withdraws the serum to the bottom of the vessel. The short tube through which the air is exhausted remains as usual. Any aspirating-syringe will serve. The serum can then be drawn into the graduate by the ordinary method, readily mixed by agitation with the blue which has previously been placed therein, and then forced back into the pleura by reversing the action of the aspirating-syringe. The process can be repeated a sufficient number of times to take up all, or nearly all the blue. This method does away with sterilizing the syringe, and otherwise preserves it (for the action of the blue is rather destructive to the valves); it also shortens the course over which

the serum travels and lessens proportionately the liability to possible infection.

I have employed this method of treatment in 24 cases of pleural effusion including one suppurative case. In this case fifteen grains of methylene blue was injected at Columbus Hospital, May 11, 1900, by the same method that I have described for the serous cases. The dye was found in the urine four hours later, and was excreted sluggishly but continuously until the pleural cavity was emptied by free incision May 22d, after which date the greenish tint gradually faded from the urine. The fluid evacuated measured about three quarts of bluish-green pus of rather offensive odor. Subsequent adhesions formed rapidly, and the patient left the hospital June 12, 1900—thirty-two days after injection and twenty-one days after operation with a small discharging sinus which healed uninterruptedly under dispensary treatment. Castaigne in *La Presse Médicale*, March, 28, 1900, concludes, after considerable experimental work in this direction, that there is no absorption of soluble substances in a pleural suppurative effusion due to tuberculous or pneumococcus infection. He readily admits, however, this absorptive power to the pleura in empyemata of streptococcus etiology and even in a hemorrhagic effusion of cancerous origin.

Of the 23 serofibrinous cases treated by this method, short histories of twenty appear in my original article. The course of the three additional cases deviated in no essential particular from the first series. One, however, accompanied by well-marked signs of pulmonary tuberculosis, and presenting abundant tubercle bacilli in the sputum, exhibited an unusually tardy elimination of the blue in the urine, namely, fourteen days. The pulmonary complications of this patient delayed his convalescence and he remained twenty-six days in the hospital after the injection. After a month's subsequent treatment in the dispensary he still had his cough and a mild fever, but his general condition was fair and with the exception of some dulness and a few crackling râles no evidence of his plural trouble presented. The average duration of treatment for the 23 serofibrinous cases was a little under fourteen days (13.8 days).

In this list, besides the injections of methylene blue as described, some cases received salicylates, some diuretics or cathartics, and others no internal medication at all. So far as I could determine, drugs used internally had little or no influence on the rapidity of absorption. "Wolff bottles," as recommended by Dr. Walter B. James for facilitating lung distention, were employed in all cases, and with good effect. The shortest interval between the injection of methylene blue and its appearance in the urine was one hour.

Raymond and Tourlet (*La Presse Médicale*, March 14, 1900), after injecting 10 cg. (1½ grains) of methylene blue into a pleural serous effusion found the blue in the urine drawn by

catheter one-half hour later. In four of my cases paracentesis was performed a few days after injection without cutting short the period of convalescence. No considerable re-accumulation of fluid could be made out in these cases, but absorption of the rest of the effusion—for it is impossible, even if advisable, to completely empty the chest cavity—dragged along at a snail's pace, so that the time from injection to discharge from the hospital was something more than two days over the non-aspirated cases.

The quantity of methylene blue employed was from 5 to 15 grains. Most of the cases received over 10 grains. The amount of serum, by the first method, was 60 to 100 c.c. By the second, no estimate was made, but sufficient employed to carry in the dye. In this connection it is interesting to note, by way of corroboration, that Renon (in the *Bull. de l'Acad. Méd. de Paris*, July 31, 1900), reports two cases where the blue was introduced into the pleural cavity in conditions of serofibrinous exudation. In one case, the elimination, by way of the urine, lasted nine days; and in the other, three days; and he adds, "the rate of elimination corresponded with the rate of absorption of the fluid."

47 West Fifty-eighth Street.

THE APPEARANCE OF THE SOFT PALATE A PATHOGNOMONIC SYMPTOM OF EPIDEMIC INFLUENZA.

BY LOUIS KOLIPINSKI, M.D.,
OF WASHINGTON, D. C.

FROM a habit of examining the fauces in all cases of epidemic influenza that presented themselves and from the same practice in all instances in which the disease was suspected as the primary cause of sickness there has grown gradually the conviction in the writer's mind that influenza can be diagnosed with ease and certainty by observing the peculiarity of appearance of the *velum palati*. This was found to be constant where the general symptoms were sufficient to make a diagnosis certain. It was further noted that it preceded the initial chill and fever by some days and that it still persisted when convalescence was apparently ended.

Of greater utility and satisfaction, perhaps, was that its presence made clear the origin of those numerous anomalous types one sees during an epidemic of grip in which its recognition is neglected or the causal factor is suspected after such an irregular case has run its more or less protracted course. Thus, acute eczema, bilious vomiting, morning vertigo in women, irritative laryngeal cough, neuralgia of the face and chest, acute pelvic pain in women are some of these irregular forms.

The phenomenon in question is seen upon the mucous membrane of the soft palate in the form of small convex projections of a pearly whiteness or transparency. Their size is that of a grain of sand. In number they are either few

and confined to certain parts of the velum or its processes, or else abundantly scattered over the whole of its anterior surface. The certain parts exquisitely displaying them in their circumscribed form are, (1) the base of the uvula; (2) the median raphe; (3) the lateral borders of the same; (4) the anterior surface of the palatoglossal fold about the upper border of the tonsil. A spatula rubbed over them give a hard, rough sensation.

They are not distinguishable in obscure light, as in cloudy weather, nor discernible in any but a very bright artificial illumination and are best seen in sunlight, direct or diffused. They must not be confounded with minute drops of mucus or saliva often present. Sometimes they are entirely obscured by a tenacious secre-

sensation. I have never observed a patient conscious of their presence, however morbidly alert he may have been in discovering and enlarging upon his feelings in sickness.

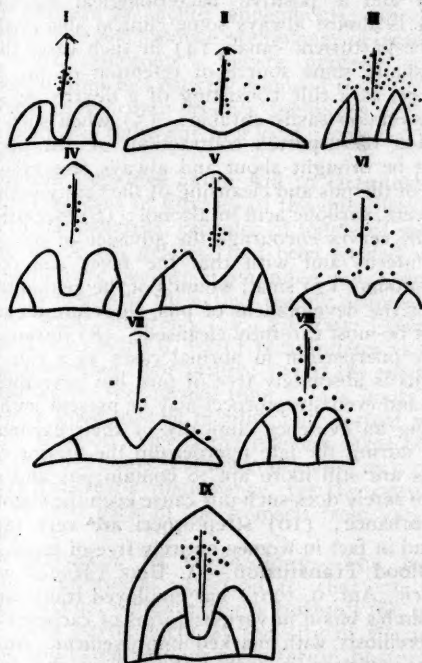
The accompanying diagrams were sketches from patients: (I.) A boy of seven; acute laryngitis; second day of influenza. (II.) Female aged forty; uvula and tonsils removed some years ago; seventh day; (III.) Male of sixty-five; chronic alcoholism; surface deep red; fourth day; (IV.) Female, twenty-four; anemic, tenth day. (V.) Male, twenty-six, sixth day. (VI.) Female, thirty-three; third day. (VII.) Female, sixty-six, second day. (VIII.) Child, four years, third day. (IX.) Female, twenty, first day.

MEDICAL PROGRESS.

Membranous Enteritis.—In his studies on membranous enteritis, H. WESTPHALEN (*Berl. klin. Woch.*, Apr. 22, 1901) concludes as follows: (1) that the disease cannot well be subdivided into a membranous enteritis depending on a catarrh and a mucous colitis, an intestinal neurosis; (2) that the formation of the so-called enteric membranes depends on a purely nervous hypersecretion of mucous; (3) that if there is an uncomplicated neurosis large masses of amorphous mucus are passed; (4) that if spastic intestinal conditions are added, the mucus is compressed in the form of stringy masses; (5) and lastly, that if the masses are voided with severe pains, one is justified in assuming an additional sensory neurosis.

Morphine and Chloroform.—LAUWERS (*Jour. de Chir.*, 1901, No. 3) states that after considerable observation of actual and threatened fatalities after chloroform anesthesia among patients to whom morphine was given hypodermatically directly after the operation, he has concluded that the bad results are more often due to the morphine depression than to the chloroform depression. He therefore believes that as a rule when chloroform has been the anesthetic, morphine should not be administered until several hours have elapsed. In the resuscitation of collapsed patients after chloroform narcosis he has found that irritation of the mucosa of the trachea is a most potent and certain excitant of the respiratory reflex. His attention to it was called by the violence of the response when during tracheotomy the mucosa is stimulated with gauze for removing false membranes or mucous collections and also in the physiological laboratory by experiments on animals, when revival of the breathing was obtained even after all life was evidently gone.

Freezing Point of Blood.—The great diagnostic value of the freezing point of the blood is justly emphasized by A. KORANYI (*Berl. klin. Woch.*, Apr. 22, 1901) and the normal limits are given by him as being $0.56-0.58^{\circ}$ C. Though some surgeons have reported absence of renal in-



Diagrams of Soft Palate in Epidemic Influenza.

tion covering the surface. The use of a handkerchief or the handle of a spoon to remove this gives the peculiar rough feel and reveals the little projections on the mucous membrane. It is assumed that their composition is that of congested or inflamed palatal mucous glands. I have had no opportunity to study their pathologic histology.

The color of the field to these bodies is flesh red in the otherwise normal individual; angry red from the consumption of alcohol or smoking tobacco; waxy white in the tuberculous, and in those subject to other wasting diseases. Sometimes punctate hemorrhages complicate the picture, and in a single instance the color of the little enlargements was bright red.

Their existence is devoid of any subjective

sufficiency in cases where 0.60° C. was found, it must be remembered that both carbon dioxides and acetone in the blood will alter the freezing-point. It is therefore necessary to treat the blood freely with oxygen before freezing it or at least to shake it for some time. Another great source of error lies in the use of improper apparatus.

Uterine Congestion and Sclerosis.—L. G. RICHELLOT and J. BAROZZI (*La Gynecologie*, 1901, No. 1) emphasize the fact that in the treatment of these two conditions respect must always be had for the age of the patient and the degree of the conditions. With the young virgin rest in bed is the true basis of the management, which should be begun as soon as the diagnosis is made and continued until the symptoms have subsided. After the real congestion is absolutely cured, rest in bed during the entire menstrual period with both the preceding and following twenty-four hours is the best prophylactic measure against a recurrence of the trouble. Between the monthly flows attention should be intelligently given to hygienic living and the avoidance of excessive exercise like bicycling, horseback-riding, dancing, etc. In the severe cases the uterine tonics may be used, especially, *hydrastis canadensis*, *viburnum prunifolium* and *piscidia erythrina*. Quinine sulphate is always to be thought of as a most serviceable drug. If the patient be an older woman, then in addition to the above general principles we use the simple or medicated douche in large quantity several times daily and as hot as can be borne; hot rectal irrigation; vaginal and rectal suppositories directed against pain and congestion; vaginal glycerine tampons combined with ichthyol and other drugs. As a later resort comes the various intra-uterine applications, especially the milder caustics nitrate of silver and sulphate of copper, or later in the bad cases chloride of zinc under suitable precautions. Hydrotherapy, cold water in a few selected robust cases, hot water in the vast majority of patients, must never be forgotten. In the wealthy resort to some of the baths may be had in obstinate cases. A rational alimentary hygiene must never be forgotten. Simple highly nutritious diet and the total avoidance of all constipation must be the rule. In general alcoholic drinks, stimulating tonics, all ferruginous medication tend to increase the congestion and are usually contraindicated. Repeated congestions often go on to sclerosis of the uterus and then we have to consider its treatment. Divulsion of the cervix with tents is an excellent means of producing softening of the entire uterus, especially the cervix and is in these early cases better than forcible dilatation. Next in order comes a careful systematic curetting as a last resort if all other means, when repeated have failed, then hysterectomy *per vaginam* is to be considered.

Treatment of Pertussis.—Excellent results have been obtained in the treatment of whooping-cough by G. SPIESS (*Münch. med. Woch.*, Apr. 9, 1901) by the use of orthoform locally ap-

plied to the larynx and glottis by means of a powder insufflator. The slight solubility of orthoform will allow its anesthetic properties to manifest themselves for hours so that a reflex contraction of the epiglottis will become impossible while after-effects can be seen only in those few patients who manifest an idiosyncrasy.

Bacteriological and Clinical Phenomena of the Puerperium.—G. VOGEL (*Zeitschr. f. Geburtsh. u. Gynäk.*, B. 44, H. 3, 1901) draws the following conclusions: (1) The formation of a copious secretion is a condition which soon disappears without harm to the woman, provided it is cared for with the proper precautions; (2) in the great majority of cases when there is a rise of temperature during the puerperium pus can be found in the uterus; (3) in women who have a fever and a positive bacteriological diagnosis there is almost always some clinical abnormality in the parturient canal; (4) in such cases there is usually some source of retention of the discharge, as a rule consisting of a dextro- or sinistro-version easily curable; (5) when such retention is suspected contraction of the uterus must be brought about and always free evacuation of the pus and cleansing of the cavity with 20 per cent. carbolic acid in alcohol; (6) lacerations of the cervix encourage the advance of pus into the uterus and with that the fever and other symptoms; (7) small wounds of the genital tract favor the development of pus, therefore all such must be most carefully cleansed; (8) during the early puerperium in normal cases as a rule the uterus is absolutely free of pus, but nevertheless pus and even streptococci may be present without giving an evidence clinically of their existence; (9) during the late puerperium the uterine contents are still more apt to contain pus and still more rarely does such pus cause even the slightest disturbance; (10) streptococci are very rarely found in fact in women entirely free of fever.

Blood Transfusion.—A. BIER (*Münch. med. Woch.*, Apr. 9, 1901) has employed transfusions of lamb's blood in various forms of cachexia and tuberculosis with marked improvement. An intense reaction is caused throughout the entire body which is most marked in the diseased organ where the hyperemic will bring on healthy, reactive changes. Small quantities of the blood, which must first be defibrinated are injected into a vein in a manner similar to that used for cinchonic acid in tuberculosis.

Errors in Diagnosis of Appendicitis.—G. E. BREWER (*Annals of Surgery*, May, 1901) cites cases in which erroneous diagnoses of appendicitis were made clinically and the true condition ascertained later by operation or other means. Among the instructive cases epitomized are two of renal calculi which closely simulated the symptoms and signs either of appendicitis or biliary calculi. They were free from the classical symptoms of hematuria, vesical irritation and lumbar tenderness and were not palpable in the kidney when exposed by lumbar incision. Two cases of right ovarian and parovarian cysts strangulated by a

twist in the pedicle very closely simulated the appendicular inflammation. In one patient a torsion in a hydrosalpinx was the true lesion. In another cholecystitis with obscure signs very closely simulated the appendicitis. One patient showed that a negative palpation of the pancreas through the stomach and the substance of the great omentum is by no means a proof that an acute suppurative pancreatitis does not exist, and that the existence of small areas of fat necrosis over the omentum and other viscera is a very good indication of the presence of such a lesion and that the general sepsis caused by the lesion may very deceptively imitate the symptoms produced by a general infection of the great peritoneal sac. A rapidly growing sarcoma of the small intestine may simulate an acute appendicitis, especially when it does not produce preliminary obstruction or other symptoms. Severe general sepsis although from foci entirely removed from the abdominal cavity, may produce symptoms very remarkably like those due to a local or general peritonitis.

Glutoid Capsules as an Aid to Diagnosis.—In the diagnosis of diseases of the intestines and also of the pancreas, capsules of iodide of potassium, where the gelatine had been treated with formalin have been recommended, since, while insoluble in gastric juice, they readily disintegrate in the small intestines. F. FROMME (*Munch. med. Woch.*, April 9, 1901) recapitulates as follows concerning their utility: (1) if the reaction occurs within the normal time ($3\frac{1}{2}$ -5 hours) it proves a good gastric motility and normal pancreatic function; (2) if the reaction takes place later than 7-8 hours it is not conclusive, as it may signify pancreatic disturbance, yet the capsules may be held back in the stomach from various causes.

Streptococcus in Gynecology.—The most frequent puerperal infection is that of the streptococcus, which extends through the uterine walls particularly at the site of the placenta, and often sets up an anterior, posterior, or lateral parametritis. Generally these infections are limited to the pelvic lymphatics, but they may cause abscesses as high as the umbilicus anteriorly, the mediastinum posteriorly, or on the venter of either ilium. GUY L. HUNTER (*Am. Gyn. and Obstet. Journ.*, May, 1901) considers that the probable diagnosis should be made from the history alone, palpation being of next importance. The dense cellulitic mass usually situated in the subperitoneal tissues, and localized on one side or in one region, he designates as the characteristic postpuerperal streptococcus lesion.

Artificial Respiration.—The abdominal method of artificial respiration introduced by T. E. SATTERTHWAITHE is described (*Post-Graduate*, May, 1901) by him as follows: To get rid of the water in the body, place on face with outstretched arms, and head lower than hips, wedge mouth open with a bit of wood or knotted handkerchief. Kneel at right of patient,

and while depressing patient's tongue with right hand, push bowels and other abdominal viscera against diaphragm with left hand. Keep up pressure until water ceases to flow from mouth, or until artificial respiration can be made effective. Then turn body on back, in horizontal position, arms at sides, raise pit of stomach by a bundle of clothing under back, and with right finger on back of tongue press the diaphragm upward with left hand. Then cease pressure and the diaphragm will fall and the lungs inflate with air. Begin with three or four movements in a minute, and increase to ten or fifteen. If there are two operators, Sylvester's plan may be employed in addition. When respiration is re-established, remove to a warm place, apply dry heat to the body, and cautiously give hot broth, beef tea, or alcoholics, at first in minute quantities.

Relief of Nephroptosis.—Various methods have been devised by which it was supposed that a movable kidney could be held in place by the application of an abdominal binder. G. M. EDEBOHLS (*Med. Rec.*, May 4, 1901) shows how difficult it is for one to prevent the descent of a movable kidney even by the clever application of the hand, and hence mechanical support could hardly be expected to be efficacious unless an unbearable pressure was exerted. Furthermore, manipulations or pressure upon the kidneys have been shown to materially change the character of the urine. Kidney pads, therefore, should never be used. Since simple bandages act by supporting the entire contents of the abdomen the degree of benefit will depend largely upon the amount of general enteroptosis which accompanies the nephroptosis. In all cases in which relief of the symptoms cannot be obtained from the simple bandage or corset, nephropexy is indicated.

Abdominal Pain in Typhoid.—Very little attention is paid by authors to this very frequent and distressing symptom. F. MCCRAE has analyzed 500 cases appearing in the Johns Hopkins Hospital (*N. Y. Med. Jour.*, May 4, 1901) and finds that pain is present at some time during the illness in at least two-fifths of the cases. Pain occurred with perforation or hemorrhage in about five per cent. of all cases, and it was most constantly present with perforation, when it was usually sudden in onset, sharp in character and paroxysmal. The pain of perforation was most closely simulated by the pain of hemorrhage, of phlebitis or of unknown origin. Among the other frequent causes of abdominal pain he mentions pleurisy, pneumonia, distended bladder, solid food, vomiting or constipation, appendicitis, peritonitis, cholecystitis or liver abscess. At the onset of the disease the pain may be so severe as to lead to a mistaken diagnosis and yet no adequate cause for the symptom be made out. In over twelve per cent. of patients complaining of pain no discoverable cause was detected and of these there was a considerable number who presented many of the features of perforation, such

as local abdominal symptoms and a moderate leucocytosis. Several of these when operated upon showed nothing but a slight peritoneal irritation at the site of a Peyer's patch.

Suprarenal Extract in Cardiac Disease.—

The dried and powdered gland loosely packed in a gelatin capsule is thoroughly chewed and swallowed without water. About three grains is an ordinary dose and S. FLOERSHEIM (*N. Y. Med. Jour.*, May 4, 1901) finds that when such a dose is properly administered, a decided effect upon the heart's action can be noted within five minutes, at which time the maximum effect is obtained. The action is continued from five minutes to three hours and the influence seems to be to increase the force of the heart beat and improve the tone of the vessels. There seems to be no contra-indications and poisonous effects are unknown.

Traumatic Rupture of Cardiac Valves.—The mooted question, whether rupture of a heart-valve may result from external violence, is answered in the affirmative by F. STRASSMANN (*Zeitschrift f. klin. Med.*, Vol. 42, Nos. 5 and 6). This patient sustained a contusion of the chest and in the course of six months developed all the symptoms of disturbed circulation which ultimately led to his death. At autopsy healed fractures of four ribs, dilatation of the heart, pericarditis, partial rupture of the aorta and rupture of one of the aortic valves, together with the usual signs of decomposition were found.

Transudates and Exudates.—The usual rules that exudates have a specific gravity above 1018, albumin more than 5 per cent. and an acid reaction, while transudates are lighter than 1018, contain less than 5 per cent albumin and are alkaline, often do not suffice for a differential diagnosis between both. A. WOLFF (*Zeitschrift f. klin. Med.*, Vol. 42, Nos. 5 and 6) recommends a study of the morphological elements. He recognizes two groups: (1) where there are polynuclear leucocytes with a few erythrocytes; (2) where lymphocytes and erythrocytes form the main elements. The former corresponds to the exudates, the latter to the transudates. In tuberculosis the elements found generally belong to the second group; this, together with the usual sterility of the fluid, stamps it as a transudate caused probably by irritation of the pleura by the toxins of the tubercle bacillus. If a cavity breaks into the pleura, the transudate morphologically becomes an exudate.

THERAPEUTIC HINTS.

Middle-Ear Diseases.—If the Eustachian tube is closed by inflammatory products, inflation should be performed, or, if this fails to open the tube, the Eustachian catheter may be passed. The nasal cavity should always be cleaned before the inflation, or septic material may be carried up the tube. After inflation,

the pharyngeal end of the tube should be treated with astringents. In acute otitis media, put the patient to bed, give saline cathartic, and apply dry heat to relieve the pain. Avoid moist heat, oils, and aqueous solutions. Leeches may be applied in front of the tragus. If the pain is very severe, coal-tar products may be given, but avoid opium as it may mask the symptoms of a mastoid involvement. If these measures do not relieve early, open the drum; if it perforates make the opening large enough for free drainage. Pay special attention to the condition of the nose and pharynx. The chronic hypertrophic or hyperplastic inflammations causing dull hearing and subjective noises are most frequently caused by adenoids, enlarged pharyngeal tonsils, hypertrophied turbinate, or deflected septum. If still in the hypertrophic stage and there is fluid in the middle ear, inflate to remove it by the Eustachian tube; or, if this fails, do paracentesis and then inflate with absorbing and stimulating vapors, making mild massage of the drum. If the middle ear is in a hyperplastic condition with atrophy, it is best to remove the malleus and incus and mobilize the stapes. Remember that middle-ear disease of one side tends to the impairment of hearing on the opposite side.—E. V. RIKER (*The Physician and Surgeon*, April, 1901).

Camphorated Oil.—Camphor is an antispasmodic and a powerful cardiac tonic, capable of restoring the vigor of the heart-muscle when it is weakened by pyrexia. It is not toxic, but one gram (gr. xv) a day is full dosage. The only contraindication is pregnancy, as abortion has resulted from large doses. Given by injection, camphorated oil acts rapidly, is painless, and does not produce nervous symptoms like caffeine. In tuberculosis it modifies the bronchial secretions and stimulates phagocytosis. The mean dose for an adult should be 2 to 8 grams (3ss-ij) a day of 10 per cent. oil.—E. VAILLANT, *Journ. de Méd. de Paris*, Apr. 28, 1901.

Salol in Diabetes.—Of eight cases treated by M. TESMACHER, three received no benefit. The other five had a fairly intense diabetes, with persistence of 0.6-1.5 per cent. of sugar in the urine in spite of antidiabetic diet. After about five days administration of salol gm. 1.3 (gr. xx) three times a day, the urine contained only traces of sugar. When the salol was stopped, the sugar gradually reappeared.—*La Presse Méd.*, Apr. 24, 1901.

Eczema.—Ehrmann employs:

R	Petrosulfolgm. 6.0	(3iss).
	Caseine ointment.	gm. 20.0-40.0	(5v-x).
or			
R	Petrosulfolgm. 6.0	(3iss).
	Lanolin	aa.....	20.0 (5v).
	Vaselin	aa.....	20.0 (5v).
	Zinc. oxid.	10.0 (3iiss).
	<i>Journ. de Med. de Paris</i> , Apr. 28, 1901.		

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SATURDAY, JUNE 1, 1901.

THE ANTEPARTUM BATH.

THE events of labor and the puerperium are essentially physiological and should therefore normally be exempt from pathological manifestations, yet the proportion of cases in which the postpartum temperature exceeds the bounds of health is very considerable. Statistics of European maternities give as the lowest figure 17 per cent. of postpartum temperatures while many authorities consider a rise to 101-101.8° F. normal for the child bed. Modern methods, particularly the universal adoption of aseptic and antiseptic measures have greatly reduced the proportion of puerperal casualties but the percentage of postpartum fevers is still so great as to indicate that even our best efforts are open to criticism and that we are still leaving loop holes for the entrance of disturbing factors.

By most writers these faulty results are attributed either to the introduction of septic matter into the genitalia in the process of internal examination and irrigation or to auto-infection; and to reduce these risks the use of gloves, the restriction of vaginal examinations, careful disinfection of the vaginal tract during

the labor and also the total omission of such cleansing efforts have all been recommended, while it has also been shown that the vagina itself has definite bactericidal self-purifying powers. But in spite of precautions there is still a wide gap to be bridged before the ideal can be approached and several writers have lately been considering the antepartum bath as a possible fallacy.

The ordinary tub bath is open to a number of objections since the patient at the end of the scrubbing is virtually immersed in a dilution of her own dirt. That which is removed from the more contaminated regions such as the feet, hands and anus, particularly the latter if, as is the case, the routine enema immediately precedes the bath, is spread in a thin film over the whole body while if any ulcers or discharging wounds are present a distribution of infectious organisms over the entire surface inevitably takes place. There are probably not many institutions where an adequate disinfection of the tub before use is carried out so that each bather is likely to receive contributions from the person of her predecessor and altogether the procedure is far from being a satisfactory cleaning process. Furthermore it is more than probable that in the movements of entering and leaving the tub, respiration, etc., some of this infected water enters the vagina and several authors have experimentally shown the possibility of this occurrence. Sticher (*Centralblatt f. Gynäkologie*, March 2, 1901) added to the water pure cultures of the bacillus prodigiosus, a germ not occurring in the normal vaginal secretion, and was able to recover it after the bath from the vaginas of both primiparæ and multiparæ while Stroganoff (*Centralblatt f. Gynäkologie*, Feb. 9, 1901) obtained similar positive results by using a chemical reaction (starch and iodide of potassium). This observer advises the complete abolition of the tub and the substitution for it of some modification of the Russian bath whereby the patient, seated or standing, is washed from above downward under a running stream, and does not remain in contact with the polluted water, and emphasizes the fact that by this means infection of the nipples which have been shown to be frequent portals of entry for germs is avoided.

As practical proof that this is not merely a theoretical consideration this author gives the statistics of the Imperial Maternity Asylum of

St. Petersburg where during the eighteen months in which this form of ablution has supplanted the tub and after exclusion of all other factors that might influence the results a drop of 7.4 per cent. in puerperal disease was noted.

A NEW GASTRIC FERMENT.

OVER forty years ago Marcet suggested that the stomach might possibly in addition to its proteolytic ferments possess the faculty of splitting off fatty acids from neutral fats. He was led to this conclusion because he had observed that it was only when free fatty acid was present that the bile was able to exert its emulsifying power on neutral fats which otherwise could not be acted upon. Since the fats of the food are neutral the presence of some agent adapted to break them up had to be assumed, and, since the steatolytic function of the pancreatic juice was unknown to him, Marcet ascribed this power to the stomach and detailed experiments on dogs that seemed to support his view.

Since then a few investigators have published corroboratory observations, but, on the whole, the matter has received very little attention and some text-books, like those of Bernstein, Foster and Hermann, entirely ignore the question while others, like Hammarsten and Gamgee, dismiss it with a bare mention of the possibility.

In testing gastric absorption by means of egg and grape-sugar emulsions, F. Volhard found that his preparations were acted upon in a way to recall these almost forgotten observations and on further experimentation (*Zeitschr. f. klin. Med.*, Vol. 42, Nos. 5-6) he was able to demonstrate the occurrence of very extensive breaking up of emulsified egg and milk-fat in the stomach. If a mixture of gastric juice and yolk of egg is allowed to stand at body temperature for from $\frac{3}{4}$ -1 $\frac{1}{4}$ hours, the emulsion will be destroyed and the free fat be found floating on top of a clear fluid, but this result will not be obtained if the juice be previously boiled so as to destroy its ferments. The presence of the fatty acids may be easily proven by the preparation of an ether extract, while if the emulsion be simply destroyed by the high acidity of a concentrated artificial gastric juice no such decomposition takes place. The objection that the reaction may be due to some enzyme contained in the egg itself is met by the fact that boiling the gastric juice ruins the experiment, but in working with human stomach contents there is always risk that the

retching produced by the presence of the stomach-tube may cause the regurgitation of enough pancreatic juice to invalidate the results, therefore most of the author's work was done on the pure secretion obtained from dogs having a Pawlow fistula. By macerating portions of pigs' stomachs it was found possible to obtain active glycerin extracts of the ferment and the chief seat of its secretion like that of pepsin was determined to lie in the fundus. In all, emulsions of thirteen different fats were subjected to the action of the ferment with the result that from 7 to 56 per cent. of fatty acid was obtained. A further significant observation is the fact that the presence of pepsin and hydrochloric acid in marked amounts inhibits and finally destroys the activity of the steatolytic ferment.

There seems little room for doubt of the accuracy of these observations and the existence of this addition to the list of enzymes will probably have to be regarded as an established fact, but just of how great practical importance the discovery will prove to be is hard to predict. Non-emulsified fats and artificial emulsions apparently are but little affected by the ferment, but when we consider the rôle played by the two most important natural emulsions, milk and yolk of egg, especially in sick and infant feeding, it is not unlikely that considerable practical benefit may accrue from this addition to our knowledge. That increased acidity inhibits the activity of the ferment perhaps explains the well-known repugnance for fats exhibited by patients suffering from hyperacidity, while the reason for the older observation of Pawlow that milk checks the formation of pepsin and HCl is made clear, and it seems that the gastric juice so produced is poor in these constituents but not in other ferments.

WHY ARE CHRISTIAN SCIENTISTS BAD RISKS?

THE daily papers have been inquiring on their own account concerning the attitude of insurance companies towards Christian Science that the *MEDICAL NEWS* outlined in its editorial columns last week. Business is business, seems to be the motto of the agents who are interested in getting their commission on new policies; and as far as the reporters have been able to find out in their interviews, the sentiment is that if a good healthy Christian Scientist presented himself for examination with the intention of taking out a fat policy, there would be no reason to turn him down, simply because he abhorred physicians.

The *Sun* states, however, on the authority of a general agent of one of the companies, that "if a company wants to reject Christian Scientists it will be unnecessary to make any changes in the laws or in the form of application. The company can instruct its examiners that it considers Christian Scientists poor risks. All the examiners will do then will be to ascertain if an applicant is a follower of that cult. All applicants are asked when they were last attended by physicians, when and what was their last serious illness and who is their regular physician. In answering these questions the Christian Scientist will be pretty certain to reveal himself, especially if the examiner is on the lookout for him. All that the examiner will have to do then is to hear a little heart murmur or something like that and the home office will reject the application though the applicant produce the affidavits of dozens of medical men that he is sound as a dollar."

Another of our dailies, on the other hand, while telling facetious stories *à propos* of Christian Science and insurance companies, presents statistics calculated to allay the irritation of the insured at the increased risk and the possibility of increased premiums in companies preferred by Christian Scientists by showing that out of the 200,000 believers, in the country, some 6,000 only are candidates for insurance, and advances the easy don't-bother-me argument that if a man is privileged to commit suicide when his policy is two or three years old, he is privileged to die of self-imposed neglect in illness if he desires it.

But anecdotes of inconsistencies and hard-headedness among believers who collect accident insurance after being incapacitated by the "idea" of a broken leg, only serve to turn the attention of the public from two vital facts, viz., Christian Scientists do insure their lives, and they do die earlier than if they were properly cared for. This is difficult to prove to the layman; because to him disease is something that he "gets" and "gets over."

In reality sickness is the giving out of some organ, or the loss of some function. Expert advice in the matter of repairs is as absolutely essential as it is in the case of an ocean steamer that never dares move out of dock without its chief engineer. Physicians are chiefly engaged in strengthening weak organs and regulating disordered functions; they seldom "cure"; it is left to the all-sufficient to assume that responsibility. But they do keep folks a-going; and the result is, that after fifty years of teaching the value of sanitation, disinfectants, quarantine, treatment

and sanitariums to the community, the length of life of the average man is much greater than it was, under similar conditions, half a century ago.

The Christian Scientists are bound to be fairly well because they live in a clean land; but otherwise they are bound to die sooner than if they knew what diseases were lurking in them, and slowly developing. There are any number of slowly developing maladies that if not promptly checked will terminate in death in from four to six years; diseases of the kidneys, diseases of the heart, diseases of the liver, the various forms of tuberculosis, and cancer, all insidious in their beginnings, and all requiring the microscope, and expert chemical and physical tests to discover. Among men and women over forty years of age, there is hardly one but that needs watching lest an incipient trouble becomes fatal. But with constant care, they may, they do, live to a good old age. On the success of physicians in warding off fatalities, is based the "expectation of life," which controls insurance rates.

The Christian Scientist who takes out his policy does so with the tacit assumption that he is not going to have any engineer to keep his organs in order, that he is not going to have an early diagnosis or any diagnosis whatsoever of his diseases made. He is bound to accept the physician's word if he is thrown out as a poor risk; but if he is accepted at thirty or forty as a good risk, he makes no pledge of good faith to the company, that he will not let the inevitable diseases and weaknesses of middle life run an unimpeded course to a fatal end.

The whole tremendous growth of life insurance is a thing of some fifty years. It is synchronous with the tremendous advance in science and the great lengthening of lives that would otherwise have succumbed to disease. The growth of Christian Science is a thing of a decade. The insured believers have not yet had time to see what effect a quarter of a century of neglect will have upon themselves and their families, nor have the insurance companies had a chance to prove how rapidly a "good risk" may degenerate into premature decay if he is not honest and sane in the preservation of his health.

Ten years, twenty years, thirty years, if the delusion does not die out as the kindred delusions of the century have done, will however show among Christian Scientists statistics of unchecked diseases with fatal endings that will startle the life insurance companies. Long before that time however they will have put the Christian Scientists into the class with the professional

bridge-jumpers and lion-tamers and all well-meaning fools that deliberately take their lives in their own hands; and charge them a premium in proportion to their belief.

ECHOES AND NEWS.

NEW YORK.

The Hokey-Pokey Man in New York.—In view of the fact that last week 4,000 hokey-pokey men were turned loose in New York City a recent ordinance passed at Brighton, England, is worthy of attention. The Bill provides, among other things, the infliction of a penalty of 40 shillings "on any manufacturer or dealer in ice cream, hokey-pokey or other similar commodity, who stores such articles in any room or cellar in which there is an opening to a drain, or who, in the manufacture, sale or storage of ice cream, does anything likely to expose them to infection or contamination." It would make an excellent subject for investigation by our vigilant Board of Health to determine just where and under what conditions our itinerant ice-cream vendors manufacture their cheap wares.

The New York Academy of Medicine.—A stated meeting will be held on Thursday, June 6th, at 8:15 P. M. The following program is announced: Presentation of the portrait of William H. Thomson, M.D., formerly President of the New York Academy of Medicine, by W. M. Polk, M.D.; "The Freezing-Point of Urine; Its Determination and the Inferences Which May Be Drawn From It," by J. H. Huddleston, M.D.; "The Early Recognition and Management of Arterial Degeneration," by Louis Faugères Bishop, M.D.

Medical Library of the Medical Society of the County of Kings.—This new library was thrown open on May 19, 1900, and now has over 30,000 volumes, 15,000 pamphlets and some 500 current medical periodicals. Its reading-rooms are open from 10 A. M. to 10 P. M., Sundays and holidays excepted, and its books are loaned to members of the County Society and other affiliated societies of Long Island.

Craig Colony Managers.—Dr. Pearce Bailey has been appointed a member of the Board of Managers of Craig Colony for Epileptics.

A Public Appeal for the West Side Tenement Children.—Those in charge of the Wilkes Dispensary connected with St. Mary's Free Hospital for Children, Ninth Avenue and Thirty-fourth Street, desire to enable the poor of the West Side to obtain sterilized milk for their babies. The Good Samaritan Dispensary has been enabled to do this for the poor of the East Side during the last few years, and has accomplished a great amount of good in the way of saving life and suffering. At St. Mary's there are rooms adapted for the work,

doctors and nurses anxious to aid, and a large tenement-house acquaintance in the habit of visiting the dispensary. It is estimated that to put in a sterilizing plant, steam-pipes and water-pipes, sinks for washing bottles, and to supply bottles and milk and the extra help needed, will cost the first year about five thousand dollars. Those interested may call at the hospital, or communicate with Sister Catharine, No. 407 West Thirty-fourth Street.

Dedication of New Consumptive Sanatorium.—The County Sanatorium of the Montefiore Home already described in the MEDICAL NEWS was dedicated May 30th. It is at Bedford Station, Westchester County, about forty miles from this city, and now has a capacity of thirty patients. Since its first opening three years ago, through the generous gifts from the patrons and friends of the Montefiore Home, enough money has been raised to go ahead with the construction of new buildings, which consist of a central administration hall and two pavilions on each side, the group presenting a front elevation of about 419 feet, and having accommodation for 150 consumptive patients, men and women, especially poor people, without regard to race or creed, who have no other place to go. The buildings are of frame, two stories in height, and Colonial in exterior design. The full cost of the land and grounds will foot up about \$250,000. The Sanatorium fund was originally started by two \$25,000 gifts by Lyman G. Bloomingdale and Jacob Schiff, the latest large contribution being \$40,000 from Leonard Lewisohn.

Loomis Sanatorium Buildings.—The chapel, new administration building and charitable annex were opened Monday last. Drs. William M. Polk, Henry P. Loomis and others were among the speakers.

Mt. Sinai Corner-Stone Laid.—The laying of the corner-stone of this hospital which is to be one of the most palatial in this city of beautiful hospitals took place last week with appropriate ceremonies. Among the speakers were Hon. Benjamin B. Odell, Randolph Guggenheimer, Seth Low, Edward Lauterbach and Dr. Abraham Jacobi. President Low of Columbia spoke of the foundation of Columbia College and its early association with hospital work in that the dean of the medical faculty of Columbia in 1769, Dr. Samuel Bard, called attention to the need of a public hospital in that city. Dr. Low said that he was glad to represent the same idea in the consummation of this magnificent design for the establishment of the new Mt. Sinai Hospital. Dr. Jacobi said in part:

"For most of you the definition of a modern hospital is a place to which poor sick people, men, women, and children, are carried with their pains and ills and aches and dangers to have them soothed, relieved, or removed. That is correct. But a modern hospital is no longer

the table under which 'the dogs eat of the children's crumbs.' That is what it was when incipient civilization, represented either by religious orders or by the buddings of a dawning sense of humanitarian responsibility, found it necessary to offer some aid to indigent and helpless sick fellow-creatures. A modern hospital, however, is no longer a dispenser of 'crumbs.' In it the inmates, rich or poor, enjoy the superior advantages of wealth, ingenuity, learning, and unceasing watchfulness.

"And now I will tell you in a few words of some of the points of view from which we doctors look upon a hospital. Ours is the vocation to relieve pain, remove or shorten disease, preserve limbs, save lives; or, if all that cannot be done, to soothe suffering, or render inevitable death more placid or endurable. Moreover, have your political economists ever calculated what the successful efforts of a hospital doctor or a doctor in general are worth financially to the individual and to the community? A child, an adolescent or adult dead is so much loss of capital spent on raising them; every day or week of illness that is lost to remunerative labor is so much capital squandered, and a detriment to the national wealth. Whoever dies before the physical necessity of advancing age sets a natural end to his existence is a loss to humanity.

"At the same time, a hospital is a school for doctors who learn and profit in the interest of mankind from collected and collective experience. It is a school for nurses whose very existence was not dreamed of twenty-seven years ago, before the first training school was founded in connection with Bellevue Hospital; a school for the patients and their families, by what they are taught, during their own sufferings and recovery, of cleanliness, of resources, and of preventive or curative measures; a school for the medical world abroad by the scientific contributions emanating from the institution, either individually or collectively, in the shape of reports."

Provisional Program of Clinical Days at the Albany Hospital, July and August, 1901.—Tuesday, July 2d, Introductory address by Albert Vander Veer, M.D., senior surgeon to the hospital, followed by Demonstration clinic in surgery, diagnosis and operations, by Albert Vander Veer, M.D., and Willis G. Macdonald, M.D. In the afternoon, Bender Laboratory. General remarks on the use of the microscope. Method of examination for the tubercle bacillus, by George Blumer, M.D.; Clinical lecture on chronic nephritis, by Samuel B. Ward, M.D.

Tuesday, July 9th: Address in clinical gynecology, by James P. Boyd, M.D., Demonstration of cases in the surgical wards, by W. G. Macdonald, M.D., Practical demonstration of methods for sterilization of dressings, instruments and water adapted to private practice, by C. H. Richardson, M.D. Afternoon, Bender Laboratory. The microscopic examina-

tion of urine: The significance of blood, pus and crystals, by A. W. Elting, M.D., Clinical lecture on locomotor ataxia, by Henry Hun, M.D.

Tuesday, July 16th, Demonstration of the use of the Roentgen ray in the treatment of fractures and dislocations, by William Hailes, Jr., M.D., Clinical demonstration in abdominal surgery, by W. G. Macdonald, M.D., Improved methods in the application of plaster-of-Paris dressings for the treatment of deformities, by A. W. Elting, M.D. Afternoon, Bender Laboratory. The microscopic examination of urine; the origin and significance of casts, by A. W. Elting, M.D., Application of the modern instruments of precision for diagnoses, by H. Van Rensselaer, M.D.

Tuesday, July 23d, The Roentgen ray in the diagnosis of foreign bodies (lodged), of biliary and renal calculi, of tumors, of diseases of the osseous system, by William Hailes, Jr., M.D., Demonstration and diagnosis clinic in surgery, with operations, by Albert Vander Veer, M.D., and W. G. Macdonald, M.D. Afternoon, Bender Laboratory. The methods of blood examination; red blood-corpuscles, leucocytes, hemoglobin, by A. W. Elting, M.D., Modern methods of quarantine and disinfection, by Joseph D. Craig, M.D., health officer of the city of Albany.

Tuesday, July 30th, Clinical demonstrations in dermatology, by Arthur Sautter, M.D., Catheters; their care and preservation, catheterization in stricture and enlarged prostate, by W. G. Macdonald, M.D., Demonstration of methods in infant feeding; the care of infants, at St. Margaret's Home, by H. L. K. Shaw, M.D. Afternoon, Bender Laboratory. The diagnostic value of blood examinations; anemias, leucemias, infectious processes, etc., by A. W. Elting, M.D., Modern methods in the diagnosis of cancer of the stomach, by A. MacFarlane, M.D.

Tuesday, August 6th, Demonstration of the obstetrical methods employed in the Albany Hospital, by William H. Happel, M.D., Diagnosis clinic in pelvic and abdominal diseases, examinations under anesthesia, by W. G. Macdonald, M.D., The treatment of deformities of the feet; tendon transplantation, by Arthur W. Elting, M.D. Afternoon, Bender Laboratory. The value of uterine scrapings in diagnosis, by George Blumer, M.D., Clinical demonstration in gastro-enteric diseases, by Leo H. Neuman, M.D.

Tuesday, August 13th, Methods of sterilization with particular reference to their adaptability to the wants of the general practitioner, by C. H. Richardson, M.D., Clinic in gynecology and abdominal surgery, by W. G. Macdonald, M.D., C. H. Richardson, M.D., and A. W. Elting, M.D. Afternoon, Bender Laboratory. The significance of the Widal reaction; the methods and significance of examinations for the gonococcus, by George Blumer, M.D.,

Clinical lecture on chorea and choreiform affections, by J. M. Mosher, M.D.

Tuesday, August 20th, Demonstration clinic in diseases of the nose and throat, by Arthur G. Root, M.D., Demonstration of cases in the surgical wards of the hospital, Demonstration of the use of the endoscope and cystoscope in diseases of the genito-urinary tract. Afternoon, Bender Laboratory. The value of bacteriologic examinations in cases of suspected diphtheria, with remarks on antitoxin, by A. W. Elting, M.D., Rheumatism and rheumatoid affections, by A. MacFarlane, M.D.

Tuesday, August 27th, Demonstration clinic in diseases of the nose and throat, by Arthur G. Root, M.D., Clinic in surgery, by W. G. Macdonald, M.D., A. W. Elting, M.D., and C. H. Richardson, M.D., Demonstration of clinical methods in diseases of the eye and ear, by C. S. Merrill, M.D. Afternoon, Filtration Plant. Bacteriologic examination of drinking water; its value and demonstration of methods employed at the Albany filtration plant, Demonstration of the methods for collection, transportation and the physical and chemical examination of potable water, by Willis G. Tucker, M.D.

Physicians who desire further information in reference to the above program can obtain full details by addressing Dr. Edgar A. Vander Veer, 28 Eagle Street, Albany, N. Y.

State Civil Service Examinations.—The following position is open for competitive examination, June 15, 1901. Competitors must be at least twenty-one years of age and citizens of New York State, except as otherwise indicated: Assistant Superintendent State Hospital for Crippled and Deformed Children, Tarrytown, N. Y. Salary about \$1,200 per year and maintenance. This officer is to be the business manager and steward of the institution. No medical knowledge is required. Experience in care of buildings and grounds and management of institutions and some knowledge of accounts desired. Subjects of examination and relative weights: questions on the duties of the position, including care and management of institution, purchase of supplies, accounts, etc., 6; experience and education, 4.

PHILADELPHIA.

Reception to Dr. Wyman.—Dr. Walter Wyman, Surgeon-General of the United States Marine-Hospital Service, was given a reception by the Medical Club of Philadelphia May 23d, about 150 physicians being present.

Medico-Chirurgical Commencement.—The annual commencement of the Medico-Chirurgical College was held May 25th. The graduates numbered 115—69 in medicine, 25 in dentistry, and 21 in pharmacy.

Pennsylvania State Medical Society.—The date of the annual meeting to be held in Phil-

adelphia this fall has been changed from September 17-19 to September 24-26.

First Woman Physician in Philadelphia.—Dr. Hannah W. Longshore, the first woman to practise medicine in Philadelphia, celebrated her eighty-second birthday, May 23d. She is a graduate of the Women's Medical College of this city.

Protest against Hospital.—Prominent citizens of Narberth have protested against the locating of the pay hospital for contagious disease in that borough. No site in this city could be secured and 5½ acres have been purchased at the above location.

Typhoid Fever in West Philadelphia.—An epidemic of typhoid fever is present in West Philadelphia. Of the 142 cases reported last week more than one-third were from two wards in that section. Analyses of milk and water have been made, but the source of infection has not yet been discovered. An inspection of the sewers is contemplated.

Streptothrix Infections.—At the meeting of the County Medical Society May 22d Dr. J. H. Musser, the retiring President, delivered an address on the above subject. He spoke of infections of this class other than actinomycosis and madura foot. The lungs, brain and skin are the organs most frequently involved. From the clinical standpoint they present little that is new. Pulmonary involvement is often hidden under tuberculous symptoms. The findings of the streptothrix determines the diagnosis. Dr. Musser concludes that these infections are probably overlooked in many instances. Many of the so-called sterile abscesses may be streptothrix infections. Abscesses of the brain especially those without fever may also be due to the same cause.

CHICAGO.

Chicago Eye, Ear, Nose and Throat College.—Dr. Joseph C. Beck has recently been elected to the faculty of this institution as Pathologist and Professor of Otolaryngology.

Dr. Senn's Race against the Sun.—Dr. Nicholas Senn will devote his summer vacation to a ninety days' trip around the world. He will travel in an easterly direction, and the journey has been christened by him as "a race against the sun." The same phrase will form the title of a book, in which form letters to the *Chicago Tribune* will appear later. He will be accompanied by Dr. Daniel R. Brower, his colleague at Rush Medical College, and two other professional acquaintances.

Illinois Charitable Eye and Ear Infirmary.—Dr. Charles L. Enslee, for nine years otologist at the institution, has been asked to resign, and Dr. Norval H. Pierce has been named as his successor. The resignation of Dr. Wm. L. Noble, Surgeon-in-Chief of the eye department of the hospital, also has been requested. In connection with the removal of the two phy-

sicians, it is announced by the new Board of Trustees that the old Board of Medical Control, which was discarded as obsolete for four years, again is to be put in charge of the hospital. This institution was founded by Dr. Edward L. Holmes in 1858, and more than 250,000 poor persons have been treated in the hospital during its forty years of existence.

Appointment of Dr. Campbell.—Dr. O. Beverly Campbell, of St. Joseph, Mo., has been appointed on the gynecological staff of the Post-Graduate Medical School.

Five-Year Medical Course.—The Northwestern University Medical School, of this city, has added one year to its course for the benefit of fourth-year students and practitioners. This course will be inaugurated in October, 1901. Thirty-three per cent. of the students graduated from regular four-year courses have secured at the time of graduation appointment as internes in the various hospitals. The object of this additional year is to furnish to those students who have not been successful in obtaining internships a more practical course than is compatible with the diverse routine work of the third and fourth years.

Illinois State Medical Society.—The fifty-first annual meeting was held at Peoria, May 21, 22, and 23, 1901, under the presidency of Dr. George N. Kreider, of Springfield. The Committee on Medical Legislation was empowered to draft a bill providing for a board of medical examiners in Illinois, the Committee to consult such laws as are operating best in other States. A resolution was offered and adopted that a bill be introduced at the next meeting of the Legislature requiring that the true names and quantities of the ingredients be plainly printed on each package of patent medicines and nostrums offered for sale. The Legislative Committee was requested to attempt to pass a bill forbidding in any wise exhibitions of hypnotism for the purpose of obtaining money.

Epileptic Colony.—The Legislative Committee was instructed to use all its power to secure the location of an epileptic colony in Illinois which was provided for by a bill passed by the Legislature two years ago.

Sanatorium for the Tuberculous.—The matter of securing legislation for the establishment of a sanatorium for the tuberculous was referred to a special committee which will report next year.

School of Graduation No Bar to Membership in State Society.—After considerable discussion, a resolution was adopted, that school of graduation shall be no bar to membership in the Illinois State Medical Society, providing such physician is recognized by the local society as qualified and not claiming to practise any exclusive system of medicine.

Officers of the State Society.—The following

officers were elected for the ensuing year: President, Dr. T. J. McAnally, Carbondale; First Vice-President, Dr. M. L. Harris, Chicago; Second Vice-President, Dr. J. W. Hensley, Peoria; Treasurer, Dr. Everett J. Brown, Decatur; Permanent Secretary, Dr. E. W. Weis, Ottawa; Assistant Secretary, Dr. Charles Dewey Center, Quincy. Quincy was selected as the place for holding the next annual meeting.

GENERAL.

Christian Scientists' Mecca and Medina.—It seems that the Massachusetts House does not desire to exclude Christian Scientists, or any of the so-called irregular practitioners, from the healing field, and has amended the Senate Medical Practice Bill accordingly.

Rhode Island Medical Society.—The ninety-second annual meeting of this Society will take place Thursday, June 6, 1901, in the Masonic Building, Providence. The annual address will be delivered by Dr. G. Alder Blumer, the title being "The Yesterday and To-day of Mental Medicine." Among the papers to be read are: "Etiology of Acute Pancreatitis in Children," by Dr. E. D. Cheseboro; "Simple or Transient Glycosuria," by Dr. S. A. Welch.

American Laryngological Association.—The twenty-third annual meeting of this Association was held in New Haven Tuesday, Wednesday and Thursday of this week. Dr. Henry L. Swain, of New Haven, was in the chair. President Arthur T. Hadley, of Yale, delivered the address of welcome and Dr. Swain read the president's address. Papers were read by Dr. Jonathan Dwight, of Brooklyn; Dr. A. Coolidge, Jr., of Boston; Dr. John O. Roe, of Rochester; Dr. Arthur Ames Bliss, of Philadelphia; Dr. S. Solis Cohen, of Philadelphia; Dr. Henry L. Wagner, of San Francisco; Dr. J. Edwin Rogers, of Chicago; Mayo Collier and W. F. Chappell, of New York; W. E. Casselsbury, of Chicago; Emil Mayer, of New York, and J. H. Bryan, of Washington. The members visited the Yale psychological laboratory at the close of the day's session. The annual reception was tendered by President Hadley Tuesday evening.

New Vienna Hospital.—The comprehensive plans for the reconstruction of the Vienna General Hospital are reported to be in active stages of consummation. It is proposed to spend no less than \$10,000,000 upon the improvement of hospital accommodations in Vienna, and the requisite permission has been secured from the Town Council. The Wiener Allgemeines Krankenhaus, in the Alserstrasse, which, with its many clinical institutes, and its concentration of material for clinical observation and research, is one of the leading public hospitals in Europe. Of late the growing demand for space, and the disturbances due to street traffic, have caused many complaints.

The late Professors Billroth and Albert, among others, protested vigorously, but all they could achieve was the erection of one or two temporary clinical institutes within the old hospital, as the enormous cost of a radical reform seemed prohibitive. Now it has been decided to remove two asylums, which are within a reasonable distance of the hospital, and appropriate their sites for new medical buildings. There is room for forty pavilions, with accommodation for two thousand patients, and a number of clinical institutes. The Medical School will then be one of the largest in the world, but it will be a long time, perhaps ten years, before the whole system is in working operation.

Leper Hospital Burned.—The Plantation House on the Elkhorn Plantation, Jefferson Parish, Louisiana, just purchased by the Board of Control of the Leper Home, and to which it was proposed to move the lepers now confined at Indian Camp, was burned by incendiaries at an early hour May 23d. It is recognized generally that the building was burned by persons in the neighborhood to prevent removal of the lepers there. Bitter opposition has existed to the establishment of a leper house in a thickly populated neighborhood.

Physicians Strike.—Another strike of physicians is reported in German newspapers. It appears that there exists at Bamberg, Bavaria, as in many other cities, a Krankenkasse, or mutual insurance association against illness. It has 800 members, who are entitled to twenty weeks of medical treatment a year, and the association has prospered so well that it has over \$32,000 in its treasury. In 1893 an arrangement was made with local physicians, who agreed to take care of the members at a cost not to exceed twelve cents a visit, the average charge being seven cents. Evidently the physicians did not have the best of this arrangement, yet there was no protest on their part until the association began to add insult to injury. A mountebank and hypnotist delivered a lecture in which he assailed the medical profession in the most abusive language, and extolled his own method of assisting nature in curing disease. Some of the members of the association thereupon wished to accept this fellow as one of their doctors. The physicians promptly refused to acknowledge him as a colleague, both on legal and on professional grounds. When, nevertheless, in spite of protest, a majority of the members voted to accept this healer (who objected to the use of any medicine), the physicians promptly threw up their contract, agreeing, however, to continue treatment of such patients as they had charge of at the time.

Dr. Ohlmacher and the Ohio Hospital for Epileptics.—On May 1st Dr. A. P. Ohlmacher, Director of the Pathological Laboratory at the

Ohio Hospital for Epileptics at Gallipolis was summarily discharged by Dr. H. C. Rutter, Manager of the Hospital. It now develops that immediately on learning of this action Governor Nash requested Dr. Rutter's resignation, a step he had long contemplated on account of the personal and political indiscretion of the Manager, but from which he was deterred by his respect for the opinions of the medical profession. Dr. Ohlmacher's discharge seems to have been the signal for final and speedy action on the Governor's part.

At a meeting of the Board of Trustees of the Ohio Hospital for Epileptics, May 17th, Dr. H. C. Rutter, Manager, formally tendered his resignation which had been requested by Governor Nash. At this time an effort was made by Dr. Rutter to obtain the support of the Trustees in his discharge of the Director of the Pathological Laboratory, Dr. A. P. Ohlmacher, but a letter from the Governor to the Board of Trustees was read expressly forbidding this action.

Obituary.—Dr. Theodore F. Rumbold, known in America and Europe for his contributions to medical literature and researches in nasal surgery, died in St. Louis last week, at the age of seventy-one. He was a native of Aberdeen, Scotland. He came to America in 1834.

Dr. Conrad Wienges, a Jersey City physician, died at his home, 473 Jersey Avenue, early yesterday morning. He was born in Charleston, S. C., in 1848.

Dr. Marie J. Mergler recently died in Los Angeles, California, of pernicious anemia. She was one of the leading woman physicians of Chicago and was Dean of the Woman's Medical College. Dr. Mergler was born in Bavaria. In 1876 she matriculated at the Woman's Medical College of Chicago, graduating in 1879. Soon afterward she was elected lecturer on *Materia Medica* at her Alma Mater, and later went to Zurich to study for a year. In 1881 she returned to Chicago, and began to establish a general practice. Upon the death of Dr. William H. Byford, Dr. Mergler was appointed his successor as Professor of Gynecology of the Woman's Medical College. Dr. Mergler was one of the attending surgeons at the Woman's Hospital of Chicago, and gynecologist to the Wesley Hospital. She served as Professor of Gynecology at the Post-Graduate Medical School, and when appointed on the attending staff of the Cook County Hospital was the second woman to hold such a position. Dr. Mergler was elected head physician of the Hospital for Women and Children soon after the death of Dr. Mary Thompson, its founder.

Dr. Jane Kendrick Culver, one of the most successful of the women physicians of Boston, died Monday at her home. She was born near Enfield, Mass., and was graduated at the Boston Homeopathic College in 1878.

CORRESPONDENCE.

OHIO STATE EPILEPTIC HOSPITAL CONTROVERSY.

To the Editor of the MEDICAL NEWS:

DEAR SIR: Your cordial response to my circular letter of May 4th was most gratifying and on behalf of those, like myself, who are engaged in State laboratory work and who are hampered by institutional or political restrictions I beg to thank you.¹ Since issuing that circular the events in our unfortunate local affair have followed rapidly. It is now certain that within twenty-four to thirty-six hours after he discharged me Dr. Rutter's resignation was asked for by Governor Nash. It develops that the Governor had only paused in this contemplated step fearing that Dr. Rutter's removal would embarrass the medical-scientific work of the Laboratory and thus offend the medical profession. On the 17th inst. our Board of Trustees met and here Dr. Rutter endeavored to obtain support for his action against me, but was met by a letter from the Governor expressly forbidding my disturbance.

Dr. Rutter was appointed here by the then Governor of Ohio, now President William McKinley, and Dr. Rutter's acts of offensive political partizanship have attracted attention in political circles from those in Gallia County to the President himself, thus giving the affairs of this institution an unusual prominence. It must, therefore, be evident that Governor Nash's respect for our profession and his sympathy with the scientific spirit for which the Laboratory stands make a profound impression politically; and that individual action, medical society action (like that of the Ohio State Medical Society, May 9th, commending Governor Nash for his "broad-minded statesmanship") or the voice of the medical press are very timely and will be the means of advancing the movement for State scientific medical research in political estimation.

I am glad that personalities may now be laid aside and that we may all now look to the results of our trouble here broadly and as offering an exceptional opportunity of advancing the interests of scientific medical progress.

A. P. OHLMACHER.

Gallipolis, Ohio, May 18, 1901.

To the Editor of the MEDICAL NEWS:

DEAR SIR:—My attention has just been called to a circular letter written by Dr. A. P. Ohlmacher and bearing date, May 4th. The letter is so full of misstatements and direct falsehoods that I cannot in justice to myself and the profession permit it to remain unanswered. In the first place Dr. Ohlmacher states, "I received a letter from Dr. H. C. Rutter, Manager, etc., discharging me from my position of Director of the Pathological Laboratory in this Institution. This is untrue as the letter spoken of will show. It was as follows:

Ohio Hospital for Epileptics, May 1, 1901.
Dr. A. P. Ohlmacher, Gallipolis, Ohio:

Dear Doctor—Reckoning your agreement with the Hospital for services, to be on a yearly basis, the present term will expire the middle of the current month. I consider it my duty to inform you that the management has decided to make other arrangements for the ensuing year, and therefore its business relations with you will terminate at that time.

Wishing you all the success your genius merits,
I am, Yours respectfully,

H. C. Rutter.

It will be seen that he was not discharged but notified politely that he would not be re-appointed for another year. In the next place, with a characteristic lack of modesty, he denounces his failure to be reappointed as an assault by Dr. Rutter on the Laboratory and takes advantage of a political warfare that has been waged against Dr. Rutter for years to make insinuating remarks to his discredit. He fails to state that the Laboratory is a result of Dr. Rutter's continuous labor for eight years. That it had been in successful operation for more than three years before Dr. Ohlmacher's connection with it, and that he owed his employment and continuous service entirely to the efforts of Dr. Rutter against the unceasing assaults of the political tricksters with whom Dr. Ohlmacher joined his fortunes as soon as he felt that they had a chance of success. In the next place he insults the profession by insinuating that he is the only available man capable of doing the work required in the position, and that a change implies disorganization and ruin. The absurdity of his position will be readily appreciated when it is known that Dr. Ohlmacher has had absolutely nothing to do with the establishment or maintenance of the Laboratory. He was an employé simply and purely, received an ample salary, was supplied with the best equipment obtainable, and got all the credit in the Medical world his work entitled him to. The labor of sustaining the Laboratory, securing appropriations for its maintenance, and his salary, and receiving all the criticisms of the politicians, and many state officials was my part of the work. This division of labor and rewards should be some indication of my unselfish interest in the success of the Laboratory.

Now as to the reasons for Dr. Ohlmacher's failure of re-appointment. Broadly stated his services were unsatisfactory for the reason that he constantly neglected his work, and in the opinion of his employers did not earn the salary paid him. This matter has been a subject of discussion in the Board of Trustees for more than one year and hence it cannot be said that a conclusion was hastily reached. In addition to his neglect of work his disposition has been so intensely disagreeable that he has been a focus of continual discord and inharmony. He states in his letter that seven contributions have been made from the Laboratory in the year past. This is absolutely untrue, and should not be received without at

¹Introductory phrase a gratuitous one—no response having been sent.

least mention of the contributions and where they appeared. It is true that he spent several months compiling sections for a Text Book on Pathology and while so doing absolutely neglected the research work he was employed to perform.

In his circular letter he appeals for assistance in overturning the acts of his employer for four years and coercing by the authority of the Governor the men who have built the Laboratory, successfully started it, and secured all of the aid to maintain it. In effect he seeks to ally the Medical Profession with a band of unscrupulous politicians who are at present using him to help disorganize the present management and who will fling him aside as soon as their purposes are accomplished.

The only question involved in this matter is whether or not an employer who is charged with the responsibility of men may have the right to change an employé without having his motives criticized upon the unsupported statement of the individual dislodged. The Laboratory has not been threatened by any body except Dr. Ohlmacher's new found political manipulators who will probably succeed in overthrowing its founders and supporters, and it is in aid of this gang that he invokes the assistance of the medical societies and periodicals.

H. C. RUTTER.

Gallopis, Ohio, May 20, 1901.

SOCIETY PROCEEDINGS.

AMERICAN PEDIATRIC SOCIETY.

Thirteenth Annual Meeting, Held at Niagara Falls, May 27, 28 and 29, 1901.

FIRST DAY—MAY 27TH.

President's Address.—The President, Dr. Wm. D. Booker, of Baltimore, spoke of the loss sustained by the Society since its last meeting in the death of Dr. J. H. Fruitnight, one of the most useful and highly esteemed members of the profession. The President's formal talk was devoted to a review of the early literature of cholera infantum.

History of Cholera Infantum.—The disease was first noticed as an entity by American observers. In Colonial days it was a common affection of children living along the Atlantic Coast and was at one time believed to be peculiar to that locality. Rush described it in 1777, and it went by various names during the succeeding half century, during which time it was practically unappreciated in Europe. Even today there remains in some degree a semi-traditional neglect of digestive disorders by medical men; the old tendency survives of relegating these troubles to mothers and nurses; pathologists have scarcely given proper attention to the subject. What we know of the disease we owe chiefly to the clinician. Among European countries Germany was first to give attention to

cholera infantum. France follows, but French writers of the early part of this century say the disease is practically unknown in their country, and they quote American authors on the subject. English clinicians remained indifferent to cholera infantum until the middle of the nineteenth century.

Etiology and Treatment.—These were first considered in the treatise by Rush, who also gave an accurate clinical history of the disease. In 1812 James Jackson gave a beautiful description of the wasting form of summer diarrhea in infants; his autopsies, in which he was assisted by J. C. Warren, were the first made in this connection, and served to establish the inflammatory condition of the alimentary mucous membrane. Howell in 1823 refers to atmospheric heat as a causative factor; the same subject is treated a little later by Cooke. Horner's description of ulcerated intestinal follicles, published in 1828, was of the greatest value. In historical order, the etiological factors considered were heat, dentition, worms, vitiated atmosphere, marsh miasm, the last named being referred to at a time when cholera infantum was classed with remittent fevers. In regard to treatment, calomel was a favorite drug among early writers, and stomach washing and intestinal irrigation were afterward introduced. To-day hygiene and careful dieting are the key-notes in prophylaxis and treatment.

Arteriosclerosis in a Boy.—This case was presented by Dr. Allen Baines of Toronto, who referred to the rarity of the condition. Holt refers to but seven cases. The present case is notable for the existence of "pipe-stem" arteries throughout the body. No history of syphilis could be obtained; the boy had had measles, but no other acute disease. He was a particularly healthy child. On December 8th he had three convulsions, vomited, and swollen cervical glands were noticed. Two days later he came to the hospital, and the large unhealthy ulcers in his mouth suggested cancrum oris. Antiseptics and styptics were used locally, chlorate of potash internally. On December 14th urinalysis showed 8 per cent. albumin; microscopical examination negative. Gums would bleed on slightest pressure. Repeated attacks of epistaxis occurred, which were controlled by suprarenal extract. Rigid arteries could be felt everywhere; the heart was enlarged, reaching left nipple line, and these conditions explained the frequent and almost uncontrollable hemorrhages. A vessel could be seen plainly spurting from the right side of the septum when epistaxis occurred. On January 7th, dyspnea and precordial distress; pulse 130; liver 3 inches below costal margin; heart impulse diffuse, apex located displaced downward and outward. January 8th abdomen tympanitic. January 10th, respirations becoming slower and slower, heart feeble. Death occurred at 10 a.m.

General Fibrosis Present.—Gross and minute examination after death showed general fibrosis. Margins of mitral cusps were slightly thickened; atheroma of aorta was marked; the

coronaries were hardened, and fibrosis had impaired the myocardium. In the kidneys the vascular changes were well marked, and the organs were shrunken, cortex narrow, surface lobulated. In the brain above were vessels found which were perfectly normal.

Pernicious Anemia in Infancy.—Dr. T. M. Rotch of Boston said that while clinical examinations of the blood had done much to differentiate diseases of the blood, the subject had not been exhausted. The instability of the blood-making organs in infants enhances the difficulty encountered in the diagnosis of cases during this period of life. Cabot's findings properly sum up the knowledge of the present day. It is argued that all anemias are secondary or symptomatic, but a class of cases can be separated which end fatally and for which no cause can be found. Pernicious anemia is rarer in infancy than in childhood. Up to 1897 only 25 cases were recorded occurring in patients under fifteen years; all were fatal. In 2,068 cases admitted to the children's wards of a Boston hospital no single case of idiopathic pernicious anemia is recorded. All recorded cases have been fatal except one case observed by Dr. Rotch and Dr. Maynard Ladd, an account of which Dr. Rotch presented to the Society.

Etiology.—There is no known cause and no generally accepted theory. Fatty degeneration of the heart, and an atrophic condition of the glands of the digestive tract are probably secondary, not primary. Failure has followed the attempt to find a specific micro-organism. Cabot, with justice, declares that to say merely that pernicious anemia is a disease of the blood-making organs is to admit that we do not know its cause; we know very little about these organs themselves. Hunter's theory is that of auto-intoxication from the intestinal tract. The ptomaines which he isolated from the urine are probably due to the digestive disturbances which exist in anemias. Cases of carbon-monoxide poisoning add weight to the intoxication theory. Of the pathology it need only be said that in infants the conditions correspond to those in adults.

The Blood Changes.—The most important clinical lesions are in the blood, which shows on examination feeble coagulation; no formation of rouleaux; reduction of specific gravity; diminution of bulk; a fall of red-blood-cells to 2,000,000 or even to 1,000,000; hemoglobin reduced to 30, 20, 10 per cent.; total leucocytes may be high, and the finding of some myelocytes is not uncommon; average diameter of red cells increased; megaloblasts especially characteristic among the nucleated red cells that are found; oval and pyriform red cells are regarded as characteristic.

A Case Which Apparently Recovered.—One patient, a baby, was under observation from birth, when it weighed 7½ pounds and was in all respects normal. After the second day was fed with breast milk. Digestion normal at three weeks after slight temporary evidence of

intestinal indigestion. At four months the child began to lose weight; indigestion marked. Taken off breast and modified milk substituted, first with 3.50 per cent. fat, 6 per cent. sugar, 1 per cent. proteid; later these percentages were increased to 4, 7, 2 respectively. Child gained one pound in ten days. At five months a mild attack of measles; recovery. At six months weighed 16¼ pounds; healthy in general. Some slight indigestion at irregular intervals was controlled and corrected by changes in composition of milk as needed. At eight months, pallor noticed. Nine months, milk increased to, fats 4 per cent., sugars 7 per cent., proteid 2 per cent.; improved: digestion normal. Then insidiously symptoms of anemia developed, rise of temperature, coryza, fretfulness, pallor, malaise. On November 4th, the child being ten months old, pallor was marked, temperature 100° F. Systolic murmurs developed; the face and hands and feet became puffy. No subcutaneous hemorrhage; no enlargement of spleen or lymph-nodes. Urine contained slight trace of albumin, no blood or casts. Edema could not be accounted for by condition of kidneys. The blood examination on November 5th was that of a severe secondary or a primary pernicious anemia, red cells 1,732,000, hemoglobin 30 per cent., leucocytes 9,200. No source of anemia could be traced. Milk was obtained from another herd of cows, though the earlier source of supply had previously given satisfaction and there was no reason to suspect it; the change made no difference; the child continued steadily to fail.

Treatment.—Brandy, careful feeding, cereals and broths were tried, but abandoned. On November 21st inhalation of oxygen was tried, at ten-minute intervals day and night; temperature subsided, pulse improved, apathy diminished. Dr. A. Jacobi saw the child two days after this improvement began. He suggested Liq. potass, arsen. and Ferratin, the latter as a substitute for the iron previously given in another form. In a week the arsenic was dropped as physiological reaction occurred. It was tried again and a second time was dropped. In no recorded case has oxygen been used so freely as in this instance. The improvement which occurred is shown by the tables which follow, representing a summary of repeated blood examinations made by Dr. Ladd with the coöperation of Dr. Cabot:

	Red Cells.	Hemoglobin (Per cent.)	Leucocytes.
November 21st (oxygen began).....	1,088,000	20	18,800
December 9th.....	3,000,000 +	35	10,800
January 2nd.....	4,316,000	70	11,000
January 30th.....	4,884,000	75	11,800
March 12th (nucleated red cells have disappeared).....	5,270,000	80

While the improvement in this case began from the time oxygen was first administered

under Dr. Rotch's direction, the latter does not regard the case as one which presents conclusive evidence of the value of this treatment, as cases no doubt occur which improve in the absence of treatment. Further experience is needed as the basis for scientific conclusions.

Prognosis.—Dr. Cabot regards the case as one of progressive pernicious anemia, and we must not be surprised if it goes the way of such cases. Yet to-day the patient, at eighteen months of age, weighs 20 pounds, has normal blood, and, so far as present examination can show, is a perfectly healthy child. The pathognomonic signs of progressive pernicious anemia were all present in this case; but Dr. Rotch believes that these signs lose some of their significance in infants owing to the activity of the blood-making organs in infancy.

Heart Murmurs in Infants.—Dr. Wentworth of Boston, taking up the question of heart murmurs in anemia, said he had been looking for so-called functional murmurs in babies under three years, and believed that they are very rare. It would be interesting to know whether the murmur which developed in Dr. Rotch's case still persists.

Dr. Wm. P. Northrup of New York declared that at the New York Foundling Asylum heart murmurs are common among children and infants who have no organic lesion. Thousands of such cases occur under three years of age; in fact an overwhelming proportion of heart murmurs in infants occur in the absence of valvular disease.

Dr. J. Lovett Morse of Boston said that rules of blood diagnosis which apply in adults do not hold good in infants. While in Dr. Rotch's case the blood examinations give fairly characteristic pictures of a pernicious anemia, or what would be so regarded in an adult, identical conditions of blood are met with in cases where the etiological factors are definitely known. Hence he could not concur in the prognosis which Dr. Cabot had given.

Dr. C. W. Townsend of Boston did not feel that there would be any return of the anemia in Dr. Rotch's patient. Two cases of extreme anemia in infants were recently under his observation. The diet in these cases had been insufficient, and one case promptly succumbed before treatment was well under way. In the second case, which like the first had been previously fed on modified milk, pasteurized and peptonized, the child improved as soon as a stronger diet was substituted.

Unusual Causes of Transient Albuminuria.—Dr. Dorning cited a case in which palpation of the kidney caused not merely albuminuria, but the appearance of casts in urine examined two hours after the palpation. One hour before this procedure the urinalysis had yielded negative results. A systematic investigation of this subject would be interesting.

Dr. F. A. Packard has seen a case of mov-

able kidney in which evening albuminuria is a regular occurrence; after rest in the recumbent posture the amount of albumin is decidedly diminished. The kidney in this case is retained by a pad, and practically one can tell whether or not the pad is worn and is in place by examining the patient's urine.

Dr. Henry Koplik said that all cases of transient albuminuria should be carefully watched. Even Heubner does not insist upon the purity of cases of so-called functional albuminuria; there is always a reservation to the effect that a mild grade of nephritis may be present, or to put the matter differently. The possibility of a development of nephritis should be kept in mind.

So-Called Cyclic Albuminuria.—Dr. Frank Spooner Churchill emphasized the importance of alterations in blood-vessel walls, as well as changes in the blood itself, in the production of cyclic albuminuria. A plausible theory ascribes the vascular changes to previous inflammation. The influence of posture, diet and weather changes has been pointed out by various writers on cyclic albuminuria. The absence of definite knowledge of structural conditions is due to the fact that the condition is never fatal. Where a loss of elasticity has occurred in the glomerular vessels, these vessels may be able to functionate while the person is resting and recumbent; but an increase of pressure is followed by albuminuria. Both local and general factors are involved. Osler believes that a large proportion of cases of cyclic albuminuria get well.

Tendency to Kidney Trouble Should Be Controlled.—Dr. Churchill asked whether cyclic albuminuria might not be regarded as a manifestation of hereditary tendency in the Weissmann sense. If so, this suggests the proper treatment of these cases; the "tendency" should be prevented from developing into an actual condition. Dr. Churchill made an exhaustive study of a case of so-called cyclic albuminuria in a girl eleven years old. Eighty examinations of urine made at various hours during the day, over a period of many weeks, showed the frequent presence of albumin during afternoon hours, and its absence, as a rule, in morning hours and its disappearance during the evening. The patient passed a fair amount of urine constantly and showed not the mildest symptoms of uremia at any time. Urea was passed in good quantity. Of interest were the family history, pointing to cardiovascular trouble, and the personal history, which revealed a previous attack of measles, tonsillitis, and what the family physician called "catarrhal enteritis." The latter was possibly an abortive typhoid, as expert bacteriological examination showed, in the words of the bacteriologist, "incomplete reaction to Widal." In this case, the treatment has been a low nitrogenous diet, plenty of water, 5 grains of urotropin t.i.d., massage, and

light gymnastics. Marked improvement in the character of the urine has occurred. The case could not have been diagnosed nor would necessary treatment have been instituted if frequent urinalyses, at various hours and under various conditions, had not been made.

Epidemic in Children; Questionable "Malaria."—Dr. Rowland G. Freeman reported an epidemic at the New York Foundling Asylum. The cases all developed in the early summer of 1899 in a group of children occupying a certain section of the Asylum, near which in the spring of that year excavations had been made; stagnant water was allowed to collect in these excavations early in June. It was difficult, Dr. Freeman said, to reconcile this theory of causation with the mosquito theory, as the epidemic occurred too soon after the collection of this water to have permitted the development of the plasmodium in the mosquito. Malaria was suggested as an explanation of the epidemic, because (1) there was no evidence of gastro-intestinal disorder; (2) treatment with castor oil and diet did not give relief; (3) after unsuccessful attempts to demonstrate the specific organism in the blood of six patients, in a seventh the attempt succeeded; (4) the administration of 2 grains of quinine every four hours resulted in a subsidence of the fever in all the cases. The difficulty in early diagnosis arose from the vague nature of the symptoms. Irregular fever existed in all the cases, with maximal temperatures of 100.5° to 105° F. In two cases chills were marked; two had chilly sensations; eight had headaches; in six vomiting occurred. Meanwhile 76 children, who had shared with those first mentioned the playroom near the stagnant pools, were all becoming ill. Instead of waiting for the development of definite symptoms in these 76 children, the house staff administered to each child a daily dose of 2 grains of quinine; as no benefit resulted the dose was raised to 6 grains; recovery followed in every case.

Susceptibility of Children to Malaria.—This is well known, Dr. Freeman said, in malarial districts. In such localities, as extensive investigations have shown, infection is most common in children under one year of age. As age advances, the percentage of individuals in whose blood malaria can be demonstrated progressively falls.

Strangulated Appendix in a Child of Three Months.—Aside from the occurrence of acute fatal appendicitis in an infant, this case, reported by Dr. J. P. Crozier Griffith, showed on autopsy evidences of an earlier appendicitis from which the child had recovered. Shortening of the mesentery prevented the movement of half of the appendix, while the distal end moved without impediment; thus there resulted a kinking of the appendix, strangulation and gangrene. That inflammation follows obstruction of the lumen of this viscus is well

known. Two cases previously seen by Dr. Griffith occurred in children of four years; a third case was in a child of three. In 228 cases of appendicitis reported by Fitz, twenty-two were found to have taken place in patients from ten months to ten years of age. The disease, common during adolescence, is uncommon under five years and especially rare in infants.

Persistent Laryngeal Stenosis.—Dr. Griffith reported a case which he said was of uncertain nature. After a diagnosis of laryngeal diphtheria by the family physician, the case failed to show any exudate: cultures made on the seventh and ninth days were negative. The patient was discharged after twelve days, but returned with a similar attack seven days later. Intubation gave relief. The patient, a child of twenty months, then developed and in due time recovered from pneumonia, subsequent to which another attack of laryngeal stenosis occurred. Five members of the same family have such attacks, and in every case the stridor persists night and day.

Diagnosis from Laryngismus Stridulus, etc.—The attacks differ from laryngismus stridulus in their persistency. Similar attacks have been known as the result of pressure by a tuberculous gland; but here the insertion of a tube would not have given relief. Pressure on the pneumogastric would produce only unilateral signs. Papilloma of the larynx sufficient to produce such stenosis would surely have been revealed on examination. Cultures excluded diphtheria. Acute laryngitis with spasmodic symptoms does not, as a rule, cause stridulous respiration for more than a day or two. In this case there was present at the outset a congestion of the laryngeal mucous membrane; there was a neurotic family history, and while a pronounced rachitic head was the only evidence of rachitis present, the latter element would have to be considered.

Edema Below Glottis.—Dr. B. K. Rachford had seen several cases of persistent laryngeal obstruction due to chronic edema located below the glottis. Tubes had to be left in place for several weeks. In one case a period of relief from laryngeal symptoms coincided with marked diarrheal trouble, so severe as to cause a loss of four pounds in a week. Probably there was some relation between this severe diarrhea and the temporary subsidence of the edema below the glottis.

Antitoxin in Doubtful Cases.—Dr. T. M. Rotch remarked that even where cultures failed to show the Klebs-Loeffler bacillus, and where no clinical symptoms of diphtheria could be made out, it might be wise to administer antitoxin. It is a common occurrence to get relief by means of antitoxin in cases where a positive diagnosis of diphtheria by bacteriological means has failed.

The Place of Cereals in Infant Feeding.—Dr. Henry D. Chapin's exhaustive paper at-

tracted marked attention. Dr. Chapin said that the chemical analysis of milk is not the only scientific basis for the comparison of one milk with another. It is essential to study carefully the behavior of the milk in the digestive tract. Cow's milk and woman's milk were intended by Nature for different digestive systems, and mere percentage modification of one does not make it the equal of the other for digestive purposes. Inasmuch as cow's milk forms solid curds and woman's milk flocculent curds, the curds of cow's milk intended for infants should be broken up mechanically. Cereal gruels mechanically break up curds of cow's milk, and their use is entirely rational. It is often advisable to make the standard diluent a digested gruel, as this not only breaks up the curds, but it exposes a surface of milk proteids and furnishes a certain amount of nourishment that is at once available for carrying on the work of digestion, taking the place of a part of the soluble proteids. Also, it furnishes a satisfactory substitute for milk when the latter must be withheld for a few days. A great variety of food can be supplied to an infant by means of digested gruels. The expense is trifling, and the tendency is to get back to milk feedings as soon as possible, and not to keep on indefinitely with a diet of carbohydrates, as when most infant foods are used.

The Separation of the Whey Proteids.—Dr. Rotch, who has heretofore maintained that a finer coagulum is not obtained by the use of barley-water, said that he had modified his views; starch in proper percentage does give a finer coagulum, as recent experiments at the Massachusetts General Hospital showed. But it is not at all necessary to give starch for this purpose. A more efficient measure is not to give the whole proteid of milk, but to separate the whey albumins, and to increase their proportion in the modified milk administered. By this means we obtain a finer curd than results from the use of the whole proteid plus barley water.

Necessity for a Classification of Infants.—Dr. Koplik, from a clinical viewpoint, emphasized the need of separating healthy children from sick children in considering problems of feeding. Furthermore, infants, acutely ill, must be distinguished from those chronically ill. In healthy infants it is rarely necessary to do more than to give a modified cow's milk, corrected as to percentages. In acutely sick infants no milk is satisfactory; but if here dextrinized gruels be added, the infants increase in weight and diarrhea ceases. In the chronic cases there is a prolonged intestinal toxemia. No matter what modification of milk is used the intoxication proceeds. Keller has attempted to dextrinize milk without the addition of a cereal, but concludes that the latter ingredient is essential. The author does not advocate the use of dextrinized gruels in all cases, however.

The individual intestine calls for consideration. Dr. Chapin's method of acting on milk has given excellent clinical results.

Dr. L. Emmett Holt called attention to the importance of radical changes of diet for the relief of intestinal symptoms in infants. Minor alterations in percentage he believes to be of slight relative importance. The ordinary practitioner's error is not a failure to change from one per cent. proteid to three-quarters per cent., or vice versa; it is a gross error, a failure to see things radically wrong. When a baby is persistently sick on starchy foods, take him off that diet altogether and he will do better.

Dr. Winters maintained that the relative proportions of fat and proteid were of far greater importance than the actual percentage of proteid used. A baby will get ill if given 3 per cent. fat: 1 per cent. proteid; the baby will recover when the proportions are altered to 3.50 : .50 or 4.00 : 1.00.

Dr. Saunders would not say that cereals were essential in dieting normal cases; experience, however, had convinced him that in the sick diet they were invaluable.

Amaurotic Family Idiocy.—Dr. A. C. Cotton found 36 recorded cases of amaurotic family idiocy. The name was suggested by Sachs. In its symptomatology the constant findings are to be differentiated from those which may or may not be present. The former include, in the early stages, idiocy, changes in macula lutea, paralysis; early death is common. Amaurosis is always present. In the absence of ocular symptoms a case could scarcely be diagnosed. The inconstant nervous symptoms embrace nystagmus, strabismus, spasticity, paralysis, tremors, exaggerated reflexes, hyperacusis, hyperesthesia. The etiology of the condition is still sub judice. No vascular or inflammatory changes have been found. Hirsch's theory of infection derived from mother's milk is somewhat favored by Jacobi, but in the two cases of Sachs the children were not breast fed.

Clinical History of a Case.—R. F., two years of age. Referred by physician as a case of rachitic malnutrition. Father's cousin's child died in convulsions at 20 months; was blind; never able to sit up. No consanguinity in parents; no specific history. Birth and gestation normal. At 6 mos. had bronchitis; no exanthem. First tooth at one year. Could stand with support at nine months; later muscular disability developed. Examination showed head measuring 19 inches: blank expression: pupils unequal; convergent strabismus; high arched palate: unable to hold head up; claw hands: spasticity in extremities; extremely sensitive to sight and touch; nystagmus. General convulsions occur, during which hands turn inward: each spasm lasts 15-60 seconds, followed by moaning. After 8 to 10 convulsions irritability disappears;

rest restores the convulsive tendency. The fundus showed normal disks, choroidal rings distinct and normal. The chief feature of the eye-ground was a brownish disk occupying region of macula, surrounded by a whitish zone, and densest at its center. The patient had difficulty in swallowing; this constantly increased, resulting in inanition and death.

The Little Finger of the Mongolian Imbecile and of Normal Children.—Dr. J. Park West of Bellaire, O., having had his attention called to the outward bowing of the little finger, said to be characteristic of the Mongolian imbecile, examined the little fingers of 605 children (296 males and 309 females), the ordinary children of an industrial community which included a mixture of nationalities. He found that 118 had straight little fingers, 179 fingers slightly curved, 199 distinct curvature, and 109 marked curve. The curve in the last group corresponds to what has been regarded as the peculiar possession of Mongolian imbeciles. In mental capacity the four groups of children are indistinguishable. On the other hand, Dr. West has seen 9 Mongolian imbeciles, and only one of these showed markedly curved little fingers; the fingers of the remaining 8 were exactly like those of the other three groups of normal children.

Maternal Impression.—A report by Dr. B. K. Rachford described a case in which stitch scars, resulting from an operation for appendicitis on a woman during the third month of her pregnancy, were reproduced in her child, being first noticed in the child when the latter was a year old. Dr. Rachford saw the child at birth and treated it during its first year for slight ailments. From the twelfth to the eighteenth month the marks increased in distinctness, and have since remained at a standstill. Dr. Rachford's belief is that the case is an authentic one, and that the marks may be the result of the tension on the stitches in the mother, who vomited violently for several days after her operation.

Pathological Anatomy of Cretinism.—A cretin aged six years, was treated by Dr. Frederick A. Packard and Dr. A. Hand, Jr., with thyroid extract, beginning with 2 gr. doses of the extract and gradually diminishing the dose to $\frac{1}{4}$ gr. During this time the patient lost in weight but gained height and improved mentally. While under treatment the patient developed high temperature, emaciation and anemia and died with signs of an acute illness. Autopsy showed the intestinal lesions of typhoid fever. The necrobiotic changes in the liver were more pronounced than are usually found in similar cases of typhoid in normal individuals. (Dr. Packard asks whether cretinism may not diminish vital resistance.) Of special interest in the case was the marked calcification of the arteries of the thyroid gland and the increase in the size of the posterior lobe of the pituitary body;

this posterior lobe, moreover, resembled the anterior in structure, a condition which other observers have likewise noticed. The epithelial cells in the thyroid gland were abundant but varied greatly in size and the alveoli were marked off distinctly by fibrous tissue. Colloid was relatively deficient; where not wholly absent the masses were small. The changes found in other organs were such as might be attributed to the fatal febrile affection rather than to cretinism. In the skin, however, lymphoid infiltration of the corium was noted; islets of lymphoid tissue were found, especially around the ducts of the sweat glands. Possibly this localization was due to the excessive action of the sweat glands caused by the administration of thyroid extract.

Peculiarity in Hands of Degenerate Children.—Dr. Koplik presented to the Society two casts of hands in dwarfs—one of them a cretin, the other an idiot but not a cretin. Attention was called to a peculiar prominence over the pisiform bone. Dr. Koplik first noticed this in cretins, but further investigation, in conjunction with Dr. I. Lichtenstein, showed that the same peculiarity exists in other types of degenerate children. The prominence is adjacent to the groove which separates the hand from the forearm; it is an abrupt eminence, which viewed from the side gives a bayonet-like appearance. A first impression was that it was due to hypertrophy in consequence of prolonged crawling on the floor; it has been seen, however, in a cretin three months old. It occurs in idiots, cretins, microcephalis. In patients presenting the appearance of cretins but having normal intelligence, this sign is absent. Dr. Koplik regards the condition as a true stigma of cretinism.

Vital Resistance in Cretins under Treatment.—Dr. W. S. Christopher saw a case of cretinism which developed tuberculosis in the course of treatment and was rapidly carried off. He has noticed frequently an elevation of temperature in patients under thyroid treatment: furthermore these children suffer much from disturbed sleep. When more than 2 grains of thyroid extract is used daily there is a marked increase in the urates eliminated and a tendency to the formation of uratic deposits.

Dr. J. Park West began the treatment of a cretin fifteen months ago; after six weeks of treatment severe bronchitis developed and was very badly borne; only the most careful nursing pulled the patient through the attack. The case reported by Dr. West several years ago has successfully passed through measles and is very hardy.

Dr. A. C. Cotton noticed in two cases that as the cretin characteristics disappeared the powers of resistance waned; both cases developed influenza, experimentally that with the

larger doses the rise in temperature seemed exactly to correspond with the dose given. Minimum doses being resumed, temperature became normal.

Early Improvement Under Thyroid Treatment Is Not Maintained.—The rate of improvement, according to Dr. Christopher, is a diminishing one. The patients rapidly improve at first; then betterment ceases. Dr. Northrup concurs in Dr. Christopher's view. Much depends, however, on how soon the patient begins treatment; if the administration of thyroid can be begun under one year of age the results are marvelous.

Dr. Christopher saw two colored cretins—brother and sister, the former twenty-one years old, the latter younger. The boy refused treatment: the girl accepted it and grew somewhat better. Two of the most successful cases treated by Dr. Christopher began to take thyroid between 4 and 5 years of age.

(To be Continued.)

NATIONAL ASSOCIATION FOR THE STUDY OF EPILEPSY.

First Annual Meeting Held in Washington, May 14, 15, 1901.

The President, the Hon. William Pryor Letchworth, LL.D., in the Chair.

Epileptics in Foreign Countries.—A number of communications from distinguished foreign authorities were read, Professor Paul Kovalovsky, St. Petersburg, giving an account of epileptics in Russia; Professor Jules Morel of Mons, Belgium, sending a report from that country; Professor F. Kalle and Dr. T. Kalle giving accounts of the steps that have been taken for dealing with the disease in Switzerland; Professor Oskar Medin, of the Karolinska Institute, describing the conditions that prevail in Sweden; Dr. S. C. Zavittiano, president of the Imperial Society of Constantinople making a report relative to epilepsy in Turkey; Pastor Siebold on the work that is being done at Bielefeld in Germany; Professor C. Mangazzini, of Rome, on the care and treatment of epileptics in Italy; Dr. Horelborg, medical deputy of the consul general in Rio de Janeiro, on the prevalence and treatment of the disease in Brazil; Dr. Secundino E. Sosa on the provisions that are being made in Mexico for the treatment of epileptics; and Mr. G. P. Gaskell, London, on the work of the recently formed National British Society for the Employment of Epileptics.

While some of the reports showed an awakening of public opinion to the necessity of adopting more systematic steps for dealing with the disease, all concurred in acknowledging the credit which was due to the United States for taking the practical lead in regard to the provision of cottage colonies and villages for the care and treatment of epileptics.

In the Swedish report mention was made of the fact that a law forbidding the marriage of epileptics has existed in Sweden for over a hundred and fifty years. The report from England showed that the society which has been formed there for the purpose of assisting epileptics capable of doing certain kinds of work has met with a gratifying amount of success.

Care of Epileptics in the United States.—The most interesting papers regarding the work being done in the United States were those by Dr. Frederick Peterson, of New York, the new President of the State Board of Lunacy, and Dr. William P. Spratling, superintendent of the Craig Colony for Epileptics at Sonyea, this State. Dr. Peterson traced the history of the disease from the earliest times, quoting what Hippocrates said as to its origin and nature, and also some lines from Lucretius which he regarded as giving a particularly good clinical picture of an epileptic seizure. Dr. Spratling's paper gave a detailed account of the treatment relied on at Craig Colony, which consists of giving the colonists congenial occupation, as far as possible in the open air, regulating their diet and habits of life, and only having recourse to bromides and other drugs at severe stages of the disease. Incidentally it was mentioned that the Craig Colony has received a sufficiently large appropriation this year to provide for about two hundred additional patients. When the new buildings which have been planned are completed, the colony will have facilities for more than a thousand patients. Dr. W. N. Bullard, Boston, described the progress which has been made with the establishment of the Massachusetts State Hospital for Epileptics. Dr. Wharton Sinkler gave an account of special provisions which have been made for epileptics in Pennsylvania. General Brinkerhoff, member of the Ohio State Board of Charities, spoke of the difficulties which had been encountered in that State by those who had interested themselves in the provision of a separate institution for the care of epileptics, and of the measure of success which had ultimately crowned their efforts. The New Jersey Village for Epileptics was described by its superintendent, Dr. H. M. Week, whilst statements on the condition of epileptics in Connecticut, Illinois, Texas, Virginia and North Carolina were made respectively by Dr. Edwin A. Down, Hartford; Miss Lathrop, Chicago; Dr. B. M. Worsham, Texas; Dr. William F. Drury, Petersburg, Va.; and Mr. C. B. Denson, Raleigh, N. C.

In the course of general discussion, Dr. G. H. Knight, of Lakeville, Conn., said he thought the steps that had been taken by New York, Ohio and other States were steps in the right direction, and even if they did not succeed in curing a single case, they would assuredly do a great deal in the way of checking the spread of the disease. His experience with feeble-minded children and examination into

their histories had proved that epilepsy was one of the leading causes in the production of offspring with mental deficiencies. There was a law in Connecticut forbidding the marriage of epileptics and the feeble-minded, and while there were persons who raised questions about the interference with personal rights which this involved, he did not think there was any room for such objections in so far as those who had become wards of the State were concerned. A small percentage of cases, those namely that were not wards of the State, were in a different position. If the increase of feeble-minded children was going to keep on increasing as it was doing, it would be found necessary to do something beyond the taking care and teaching of these classes. It would be necessary to stop the increase, for he did not believe that civilization could stand the inroads thus being made on it. Replying to the chairman, the speaker said he found only a very small percentage of cases of feeble-mindedness directly traceable to alcohol on the part of the parents.

Etiology of Epilepsy.—Dr. Robert H. Porter of Chicago, said he proposed reading a paper at the A. M. A. meeting at St. Paul supporting the old theory that epilepsy was due to the deterioration of the nerve cells and tissues of the brain and spinal column. It might indeed be said that impairment of the nutrition of the nerve cells was the common cause of epilepsy, idiocy and feeble-mindedness. This led to congestion of the brain, which was the immediate cause of the paroxysms. He had been studying problems connected with epilepsy for twenty years, and he was prepared to argue that the disease could be arrested and the patient cured. It was well known that remedies that stimulated the abdominal secretions helped to divert the brain circulation and if this could be done the spasms could be controlled. Later on in the proceedings the speaker exhibited a patient who, he contended, had been practically cured of epilepsy.

General Treatment.—Dr. William A. Polglase, superintendent of the Michigan Home for the Feeble-minded and Epileptics, said he had not much to add to the discussion of this phase of the subject. He had long been looking for such a plan of treatment as had just been described, and would like to know more about it. Personally he was unable to offer one single thing in treatment looking to cure. They were all agreed as to the general treatment both for relieving the spasms and alleviating the condition of the patients, but beyond that he was not prepared to go. He was not even prepared to say that in every case there was a disturbance of the cells in the center of the nervous system. Recently he thought he had struck upon a plan for the treatment of all epileptics, but he had an influx of thirty or forty patients, and the result of his experiments was to upset all his theories.

The main difficulty with which they had to contend was that there were so many different kinds of the disease, with innumerable other cases that simulated it. He would strongly advise epileptic persons not to marry, and indeed would favor a law to prevent the union of all neurotics.

Epilepsy and Marriage.—Dr. W. N. Bullard, president of the Board of Managers of the Massachusetts State Hospital for Epileptics, remarked that before they discussed the subject in its relation to marriage it was desirable to know exactly what they were discussing. There were a great many different degrees of epilepsy. There were persons who had an attack only once a year or so, and many of these were extremely able persons—men who managed large industrial concerns, lawyers, literary men and others; and there were all kinds of patients downwards from these to the insane. In considering the desirableness of prohibiting marriage they must decide what class they were dealing with. Epilepsy again was a disease or a condition of the nervous system which might be produced by a variety of causes. It might be hereditary, or it might be produced by an injury. Therefore it might be necessary to consider whether the disease was of a kind that was likely to be transmitted to the offspring of the sufferer. One thing he had noticed was that there were many cases in which the disease commenced very early in children and yet no trace of hereditary origin could be found. On all these grounds he thought it essential that they should proceed very slowly and define very clearly what classes of cases should be prohibited from marrying.

Mr. Mack of Sandusky, Ohio, called attention to the law which had been passed in Minnesota to prevent the marriage of the mentally unfit.

Dr. James M. Murdoch of Polk, Pa., said his experience was confined to institutions for the care of the feeble-minded. Large numbers of epileptics, however, came to the institution with which he was connected, and he found that they were benefited by careful diet and regulation of the secretions. The diet consisted largely of farinaceous foods, and it was found necessary to prevent tendencies to gluttony.

Dr. Down of Hartford, Conn., spoke of the different theories that existed as to the etiology of epilepsy, and the difficulty of collecting statistics and making proper classifications of sufferers from the disease. Replying to a question put by Dr. Spratling, the speaker said that it was found in Connecticut that a large proportion of the epileptics were foreign born.

Clinical Groups.—Dr. Spratling said he had been engaged in special work among epileptics for fifteen years, and he had been particularly struck by the different developments that the disease took. If neurologists ceased making

attempts to define the disease he thought it would make their works more valuable. There were many theories as to the cause or causes of epilepsy and plenty of data to support each of them, and yet none of them that could be entirely reconciled with each other. He approved of the prohibition of the marriage of epileptics, and maintained that the whole question of the proper way of providing for them should be dealt with by the national government.

Epilepsy among Negroes.—Mr. Denson of Raleigh, N. C., in speaking of epilepsy among the colored population, said that before the war, while negroes with fits were plentiful, the insane negro, that was the negro affected with anything like acute mania, was practically unknown. He did not know whether the fact that the latter had become common since was evidence of degeneration, or was to be accounted for by the circumstance that the negroes felt the slings and arrows of outrageous fortune in a way that they did not do when they had a protecting arm over them.

Dr. Wharton Sinkler, describing his experiences in Pennsylvania, dwelt on the necessity of having institutions exclusively for the care of epileptics instead of leaving them to be attended to in workhouses and hospitals for the insane.

New Office-Bearers.—The election of office-bearers for the current year resulted as follows: President, Dr. Frederick Peterson, New York; vice-presidents, the Hon. William Pryor Letchworth, Portage, N. Y., and Professor William Osler, Baltimore, Md.; secretary, Dr. William P. Spratling, Sonyea, N. Y.; treasurer, Dr. H. C. Rutter, superintendent Ohio Hospital for Epileptics, Gallipolis, Ohio.

The objects of the Association are: (1) to promote the general welfare of sufferers from epilepsy; (2) to stimulate the study of the causes and methods of cure of this disease; (3) to assist the various States in America in establishing a uniform system of care for epileptics; and (4) to advocate the care of epileptics in institutions designed for their special needs, where they may (a) receive a common school education, (b) acquire trades, and (c) be treated by the best medical skill for their malady.

NEW YORK ACADEMY OF MEDICINE—SECTION ON MEDICINE.

Stated Meeting, Held Tuesday, April 16, 1901.

E. Franklin Smith, M.D., Chairman.

Accurate Percussion Method.—Dr. George M. Converse read a paper in which he brought out a simple and accurate method of percussion of the heart, as practised by the late distinguished Professor Potain of Paris. He said that the distinctive features of the method were the use of the finger and not of Sansom's pleximeter, nor

of any other form of instrument. The percussion is formed not by a series of successive strokes, but by a single stroke of moderate force and then a pause until the significance of the sound elicited can be thoroughly appreciated. The finger, as a pleximeter, is better than any instrument because it enables the examiner to judge of the consistency of the tissues below his finger and the resistance offered by them. The method of the single stroke saves the patient pain.

Alteration of Pitch.—Dr. Converse said that the alteration of pitch is much more important for the determination of the size of the heart than the occurrence of distinct dullness. This method enables the prognosis of heart lesions to be given with much more assurance than usual. In one case when the patient came under treatment the outline of heart dullness enclosed an area of about 104 c.m. Later on percussion showed an area embracing 169 square cm. The case was one of aortic regurgitation and this increase in area showed that dilation was rapidly overcoming the influence of hypertrophy in heart compensation and that the prognosis was distinctly unfavorable.

Postmortem Verification.—In eight cases Dr. Converse has had the opportunity to verify his findings. The outlines of the heart dullness and of the sternum and the suprasternal notch and both nipples were marked on the chest wall. Over this a piece of transparent paper was placed and the outlines transferred to this. After the death of the patient, this was replaced on the chest, and various parts of the outlines marked by piercing the chest walls with large pins. In all of the eight cases the outline of dullness, as determined by percussion, represented the actual outlines of the heart beneath the chest wall.

Percussion in Deep Chests.—Dr. Judson Daland said in discussion that the points of Potain's method which are especially useful are the single stroke of the finger and the appreciation of the difference in pitch between two successive strokes, and then the looking for shades of difference in pitch rather than distinct progress from resonance to actual dullness. These points, of course, are not entirely due to Potain, but are in use by most accurate diagnosticians. In the ordinary normal chest, it is not difficult, as a rule, to map out accurately the area of the heart. In deep chests, however, with a long antero-posterior diameter, the difficulty becomes very marked. Even before true emphysema exists, this difficulty adds very greatly to the indefiniteness of percussion investigation.

Ausculatory Percussion.—Dr. A. H. Smith said that for accurate diagnosis, especially in cases with precordial tenderness, the method of auscultatory percussion is extremely helpful. There is a notable distinction in the dullness of different organs furnished by this method. There is a distinct quality of liver dullness that differentiates it easily from heart dullness. It is possible to separate the outlines of liver and heart dullness very accurately.

Arterial Spasm and Heart Dilatation.—Dr. Judson Daland of Philadelphia read a paper on a case which seems to illustrate very clearly the effect of arterial spasm in producing dilatation of the left heart. The patient is a girl, ten years of age, who had been robust and vigorous. She had suffered from measles and diphtheria, but none of the other diseases of childhood. She had never had any heart trouble, nor suffered from chorea, nor rheumatism, nor growing pains. Some time before she came under observation she had been bitten by a cat. The wound healed slowly, but was completely healed after about three weeks. About seven weeks after the cat bite, she came to the dispensary of the University of Pennsylvania, complaining of pains in the head and back. At first it was thought that there had been some slight septic condition. The true cause of the symptom was that the child had the habit of taking a certain table sauce in excess. She was also very fond of salt and ate it to excess. She had an older sister who indulged in the same peculiar taste. Both of them preferred to eat oranges with salt rather than with sugar. Because of their fondness for it the mother had given up putting the sauce on the table, but bought a bottle at Christmas-time. The child poured three ounces of the sauce into a cup and ate it on bread. Very shortly afterward she was taken with pains in the epigastrium, there was some vomiting and diarrhea and there was severe thirst and some symptoms of collapse. For some time afterward she suffered from insomnia. About a week later, she took another dose of the sauce and this proved even more severe in its effect. The child had two convulsions in each of which she was unconscious and they were marked by opisthotonus. After the convulsions there was a period of coma followed by long, deep sleep. Some days after this an anasarctous condition developed. When she was brought to the clinic she had a temperature of 99.5° F. and a pulse of 110, the specific gravity of her urine was 1.30 and one-fourth of it, by bulk, consisted of albumin.

Heart Symptoms.—The second sound at the aortic cartilage was very much accentuated, there was a systolic murmur at the apex that was transmitted into the axilla and could be distinctly heard. The apex beat was distinctly lower and to the left of its normal position. The radial artery felt like a wire. It was thin, but hard. When the pulse was obliterated by pressure, the arterial walls could still be felt, showing that they were thickened. The symptoms were those of hypertrophy, but the conclusion reached was that the condition was one of acute dilatation.

Effects of Treatment.—Under rest, with an absolute milk diet and the free administration of Basham's mixture, improvement began almost at once. The edematous condition gradually disappeared and a distinct diminution in the force and area of the apex beat could be noticed from day to day. Finally the apex beat came to occupy

its normal position again. When the patient came into the hospital, she was passing only about twenty ounces of urine a day, containing a large proportion of albumin. When at the end of about three weeks, she was discharged she was passing from twenty-five to thirty ounces a day and all the symptoms had disappeared.

Cayenne Pepper as the Toxic Factor.—A detailed analysis of the sauce was not obtained, but it is known to contain a large amount of Cayenne pepper and certain other strong spices. The original symptoms point to the existence of an acute catarrhal gastritis with the absorption of toxic material from the intestines. These led to an extreme congestion of the kidneys. As a result of this congestion some uremic symptoms developed. The toxins in the blood acted locally on the blood vessels and on the lining of the heart, causing intense irritation and some local thickening. The irritated and thickened arteries were especially liable to take on a spasmodic condition. The spasm of the arteries led to dilatation of the left ventricle and the murmur was due to this dilatation. When the left ventricle is dilated the capillary muscles are displaced from their usual position, they do not act simultaneously and this failure of consentaneity leaves a chink or space in the leaflets of the valve. This causes leakage and explains the temporary murmur.

Mitral Leakage Conservative.—This mitral leakage is really a conservative effort on Nature's part. It relieves the strain on the left ventricle, which in its dilated condition and acting against spasm in the arteries would be unable to empty itself by contraction only for the relief afforded by the opening at the mitral valve. This is really Nature's incipient compensation for the mechanical difficulties against which the heart has to work.

High Pulse in Scarletina.—In discussion Dr. William H. Thomson said that Dr. Daland's communication was of interest from many standpoints. There seems no doubt that in certain infectious diseases, as, for instance, scarlet fever and rheumatism, complete acute dilatation of the heart depends at times on spasms of the arteries. That this spasm exists there is no doubt. A high tension pulse is one of the best diagnostic signs of scarlet fever. When called to see a child suddenly awakened from its sleep with some vomiting, a high fever, slight sore throat, the presence of a small artery with high tension, one may consider these symptoms almost pathognomonic of scarlet fever. This small contracted artery may help to the acute dilatation.

Internal Arterial Spasm.—Dr. Thomson called attention to the fact that at times when there is no spasm of the external palpable arteries, there may be spasm of internal arteries especially in the splanchnic region. It is evident that in many cases some sort of vasomotor storm in the splanchnic area leads to spasm of the arterioles and so interferes with the normal course of elimination.

Atheroma Without Hypertrophy.—There have been a number of cases reported now in which extensive atheroma of arteries existed without the development of hypertrophy of the heart. This means that there is no necessary connection between the two pathological conditions. It would seem that too much stress has been laid on the physical factor in the production of cardiac hypertrophy. The mere fact of the arteries losing their elasticity is not enough to cause the heart to hypertrophy. At an insane asylum in England, 194 cases of atheromatous arteries were reported, in only four of which hypertrophy of the heart existed. On the other hand in the autopsies at Charing Cross Hospital 80 per cent. of the cases with atheromatous arteries have heart hypertrophy. The difference between the lives of the two classes of patients indicates at once the reason for this. Nearly all the admissions at Charing Cross Hospital are of working people. Heart hypertrophy is due to strain. Strain also produces arterio-capillary fibrosis. Atheroma develops especially on the parts of the arteries where the strain is greatest—on the outer portion of the arch of the aorta, for instance, and where arteries branch and so are subjected to special strain. The artery in the body which is most liable to atheroma is the one most subjected to muscular influences. This is the anterior tibia. On the other hand the pulmonary artery is very rarely atheromatous and never except when there is mitral stenosis. The question of the exact point in the arterial system at which the strain originates has long been under discussion. The arteries are especially affected. Their muscular coats are marked by increase in size and sclerotic conditions easily develop in them. It is clear, then, that the source of the strain is at some point beyond the arteries. It undoubtedly exists in the capillaries. The network of minute vessels connecting veins and arteries is especially liable to be affected by toxins and the minuteness of the vessels enables them to add greatly to the circulatory tension, when affected sufficiently, to become spasmodically contracted. Thoma showed experimentally on recent dead bodies that the arteries would stand considerable pressure. He was able to inject seventeen liters of salt solution before the exudation of fluid into the tissues. Where atheromatous conditions existed, however, four liters of salt solution were sufficient to produce edema. The normal resisting power of the arterial system was thus reduced to one-fourth its capacity.

Cause of Capillary Resistance.—The primary cause of the rise in blood-pressure which is due to the capillary resistance is some toxin substance in the circulation which interferes with the normal osmotic changes between the blood and the extravascular fluid. Syphilis, alcoholism, plumbism and the poisons of the infectious diseases act on the interior of the capillaries, rather than directly on the larger blood-vessels.

Treatment of Incipient Capillary Fibrosis.—The great remedy for the neutralization of these

toxic substances in the blood is undoubtedly oxygen. The conditions that finally lead up to fatal degeneration in the circulatory system can be modified favorably by oxidation. For these cases the best antitoxin is fresh air, day and night. Nothing better than this can be advised and no method of drug treatment can replace it.

Angina Without Lesions.—Dr. Beverley Robinson said that, as a rule, when angina pectoris is considered, spasm of arteries is thought of and the paroxysms of the disease are attributed to a spasm of the coronary arteries with ischemia of parts of the heart wall. There are certain cases, however, in which death takes place sometimes after a series of well-marked attacks of angina pectoris, sometimes after a single attack in which the sclerotic condition of the coronary arteries is thought to exist, and yet at autopsy none is found. No reason for death can be found in some of these cases. They remind one of another series of cases in which what is probably an ischemic condition of cerebral centers simulates apoplexy. The diagnosis of apoplexy may even be made. Death may occur and at autopsy nothing in the shape of a definite hemorrhage be found. The only conclusion in such cases is that the apoplectic condition is due to spasm of the cerebral arteries.

Causes not Physical.—The physical factors that produce heart disease have been deemed too important, and it is not realized that a large number of chemical and biological factors enter into the problem. The assumption that more is known about heart disease than is really the case had led to a good deal of credulousness as to specific cures for heart troubles. There seems no good reason to think that Nauheim, for instance, possesses any specific for heart trouble and yet cases are benefited after failure to find relief under other treatment. Suggestion plays an important rôle in these cases and, undoubtedly, sometimes where lesions are supposed to exist, there is only some passing condition that an improvement of the general system help very materially.

Myocardial Degeneration.—Dr. M. Manges said that high tension due to spasm in the arterial system undoubtedly is a very important factor in the production of myocardial heart dilatation. It must not be forgotten, however, that this dilatation is helped on by myocardial changes which are produced by the toxins of the infectious diseases, or by other toxic substances that occur in the blood. Just as the coats of the arteries are affected, and among them the muscular coat, so the inner lining of the heart and the myocardium is affected. Besides this the arteries of the heart themselves are affected and this produces myocardial changes. When the heart vessels are not affected changes in the heart are infrequent. Arteriosclerosis is almost invariably toxic in origin and is not merely due to physical factors. Schroeter showed by weighing

the heart and sections of the heart that often, and when extensive arteriosclerosis existed, there was no hypertrophy either of the whole heart nor of parts of it.

Unity of Circulatory System.—Dr. Andrew H. Smith said that the arterial tree must not be thought of as something distinct from the heart, but as really a continuation of the heart. Every part of the arterial system has a muscular coat and this acts continuously and successively in the production of the blood flow. The contraction begins in the auricle, continues to the ventricle, and spreads from there to the aorta and its branches down to the smallest of them. Every bit of this contraction requires the exercise of nervous power. The question of arterial spasm takes on a new aspect because of the changes taking place in the myocardium, because they are taking place in other parts of the arterial system and all of these parts are joined not only by sympathy and physical factors, but by continuity of structure and community of function.

Sphygmographic Tracings.—Dr. Van Santvort said that the sphygmogram, when properly used, enables one to recognize changes in blood-pressure that would otherwise remain unknown. The second sound, although often spoken of, is no index of arterial tension, or of the strength of heart contraction. In pneumonia the second sound is often strong out of all proportion to the normal, but is not a sign of heart force, but of difference of pressure on the two sides of the heart valves.

Evidence from Single Case.—In closing the discussion Dr. Judson Daland said that the reason for giving the case he had described in so much detail was that it seemed to set forth the problem of heart dilatation in its simplest terms. The arterial affection was due to a simple toxic substance and not to the complicated conditions which exist in infectious diseases. It occurred in a child in whom the wear and tear of the arterial system had been very little and who had been reasonably robust before the illness. The case also seemed to throw light on the occurrence of uremia. Uremic symptoms differ in every case and undoubtedly the poisons which caused the symptoms were very different in different patients. This case seems to emphasize the fact that there is a marked difference between the effect of inflammatory vascular changes and pure dynamic changes. Undoubtedly Dr. Thompson's observations, which seem to point to internal arterial spasms, will be confined and will throw light on the origin of various heart symptoms. The obstruction which produces high tension in the circulation seems undoubtedly to be situated in the capillaries.

Long Island Climate.—Dr. LeGrand N. Denslow said that the nearest true maritime climate in New York is situated on the eastern part of Long Island. A series of observations has shown him that the climate of this part of

the island is less liable to change, is warmer in winter and cooler in summer, and has more sunny days than almost any other part of the United States and than any place along the Atlantic Coast. It seems sure that at times heat from the Gulf Stream is carried to Long Island and modifies the weather. The mean summer temperature is that of northern New York. The mean winter temperature is between that of New York and Washington. The ocean retards the progress of the seasons and hence there are less sudden changes of temperature. There is less range of daily temperature and the midday heat is tempered by an ocean breeze. The south is particularly favored in this way. The hills and timberland lying back of this southern shore protect it very well in the winter time. Block Island represents the eastern end of Long Island very well. According to the Government Reports there is less range of temperature on Block Island than almost anywhere else in the country. There are only seven degrees of difference between day and night. The first frost on the eastern end of the Island comes later by three weeks than in New York City. It is wonderful what a number of sunshiny days there are in eastern Long Island. Near the ocean one would almost naturally expect rather cloudy, dark weather. As a matter of fact the eastern and southern shore of Long Island compare very favorably with the most sunny parts of the United States. There are 100 more sunny days than in New York City, and 150 more than in north central New York, at Rochester, for example. It is a matter for surprise that this state of weather affairs should exist. It is hard to account for it. But the fact remains that the eastern end of long Island makes an exceedingly favorable climate for invalids. At a distance of only three hours from New York there is a very favorable place for patients suffering from tuberculosis, or from heart, or kidney trouble. While we hesitate to send people to distant parts of the country there need be no hesitation to advise residence at so short a distance from home.

BOOK REVIEWS.

A MANUAL OF PRACTICAL HYGIENE FOR STUDENTS, PHYSICIANS AND MEDICAL OFFICERS. By CHARLES HARRINGTON, M.D., Assistant Professor of Hygiene in the Medical School of Harvard University. Lea Brothers & Co., Philadelphia and New York.

IN the great annual output of medical works it is a rare thing to find one that startles the prosaic reviewer into enthusiasm. It was given to Huxley to write science as literature, and something of that same vivifying touch of realism and interest in actualities is found in the pages of Dr. Harrington's Manual.

It is impossible to dip here and there in the

volume, one is fascinated into steady reading, and is made aware of the touch of a man who knows his facts at first hand from personal observation, and who has not compiled them from other text-books. There is moreover none of the musty laboratory atmosphere that obscures rather than enlightens, so prevalent in other works on hygiene. We miss, with a sense of relief, the endless technical bacteriological discussions and the pages of statistical tables which form so large a part of the scholastic treatises on this subject.

Foods, Air, the Soil, Water, Habitations, Sewage and Garbage Disposal, Disinfectants and Disinfection, Quarantine, Military Hygiene, Naval and Marine Hygiene and Tropical Hygiene, Hygiene of Occupation, Vital Statistics, Personal Hygiene, Vaccination and Disposal of the Dead are the subjects treated.

In all of the chapters the author has gone directly into the heart of the subject-matter, and as a consequence there is no padding in the work. It is all solid material. We congratulate the author on giving such an excellent manual and recommend it cordially to our circle of readers. We desire moreover to suggest that because of its simple and straightforward style no better book could be recommended by a physician to his patients who have a leaning toward acquiring that "knowledge" which is a "dangerous thing" from other sources not so trustworthy.

A TREATISE ON MENTAL DISEASES. Based upon the lecture course at the Johns Hopkins University, 1899, and designed for the use of practitioners and students of medicine. By HENRY J. BERKLEY, M.D., Clinical Professor of Psychiatry at the Johns Hopkins University, Chief Visiting Physician to the City Insane Asylum, Baltimore. D. Appleton & Company, New York.

THE prefatory note to this book begins with the following sentence: "The absence from English medical literature of a comprehensive, practical work on mental diseases—one adapted to the needs of the busy practitioner as well as to those of the student of psychiatry—has led the writer to prepare this treatise embodying a consideration of all the principal forms of psychical disturbance." This statement is not justified in the least and it is a pity that such an excellent presentation should, at the outset, imply such an aspersion on English and American psychiatry. That Dr. Berkley has given us the best modern English treatise we gladly admit, but the problems of psychical disturbance have been written on by others both "practically" and "comprehensively." There is, we believe, no domain in medicine which is capable of receiving so many different interpretations and it is to the author's credit that he has been able to arrange and epitomize, and at the same time to bring some order into the chaos of modern German psychological psychiatry.

The work has many excellent points. It is, we believe, almost alone in its complete study of

morbid anatomy, as revealed by the histological technic of the last decade, thus supplementing Bevan Lewis' excellent treatise. The characterization of the clinical types of insanity is extremely well done and forms an important contribution to American psychiatric literature. We confess to a certain sense of being adrift on this modern sea with so many of the familiar landmarks ruthlessly destroyed, yet out of the new order of things a closer grasp of vital principles is inevitable.

One of the most striking parts of the book is the statement with regard to the unfavorable prognosis of most mental diseases. When Kraepelin stated that among 1,000 cases of acute mania he had observed only one in which the symptoms did not recur, most psychiatrists were inclined to doubt the value of his statistics. Now that the discussion of the subject has been carried on for some time, Berkley is in a position to announce the conclusions generally accepted in the matter. Simple mania, he says, is an exceedingly rare form of mental disease and therefore, one should be cautious in making a prognosis of final recovery. Relapses after a number of years, when stability is apparently assured, are frequent, as every one interested in mental medicine knows only too well. With regard to melancholia he says, "Relapses in this form of mental disease are very common, perhaps one-half of those affected falling back at some period, from a few weeks to years."

Professor Berkley's remarks on treatment are especially complete and practical. Many of his therapeutic hints are the result of his own experience.

THE OPTICIAN'S MANUAL. A Treatise on the Science and Practice of Optics. By C. H. BROWN, M.D., Graduate of the University of Pennsylvania; Professor of Optics and Refraction, etc., etc. The Keystone, Philadelphia, Pa.

FOURTH edition in four years is evidence the book fills its own place. Careful reading of this shapely, readable manual shows that it is couched in language plain and intelligible. No attempt is made to be scholarly. The aim is instruction by means of the simplest language that will convey it elegantly. The author lucidly treats all the necessary matters pertaining to the optician's complete equipment. In his chapter on "Outfit Required," other books of allied nature are named, which, if all are carefully read, will carry the reader beyond the merely practical and elementary into a more or less masterful acquaintance with these subjects. This applies especially to the scientific work of Dr. M. Tscherning. It was a thoughtful thing to append the glossary. But it is to be hoped those who could read this book with interest and a desire to master it and read its congeners, would desire to have a larger dictionary of terms than this and a fuller consideration of them. But the book reads well and accomplishes its aim, which is high praise.